VOLUME LVIII NUMBER FOUR

# THE NATIONAL GEOGRAPHIC MAGAZINE

OCTOBER, 1930

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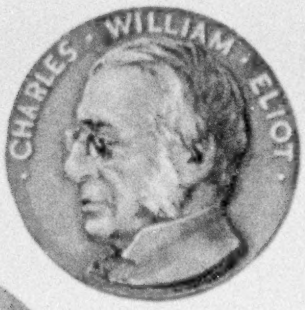

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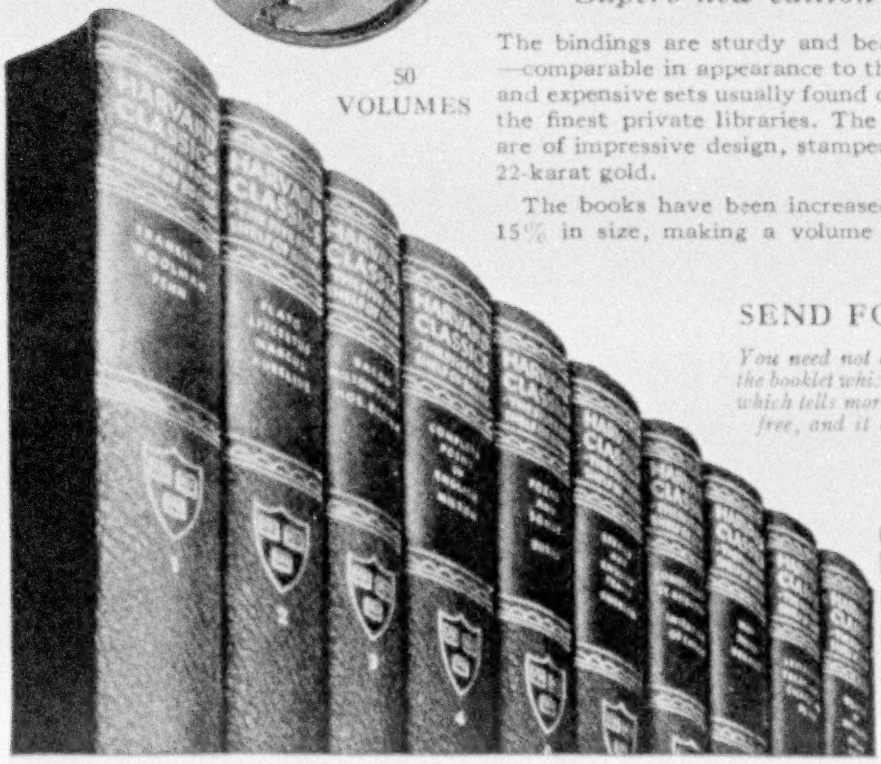

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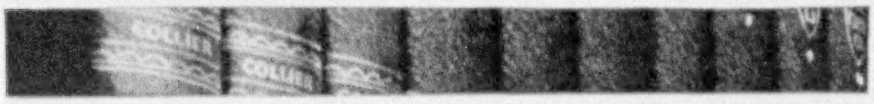

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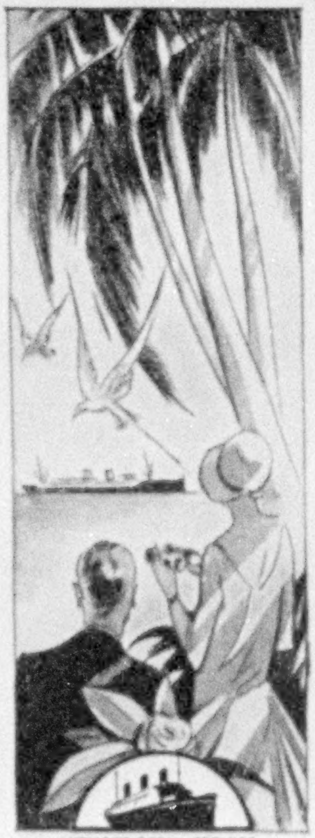

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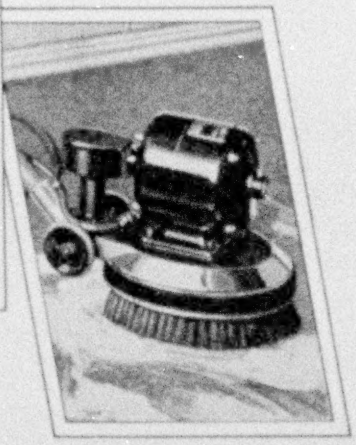

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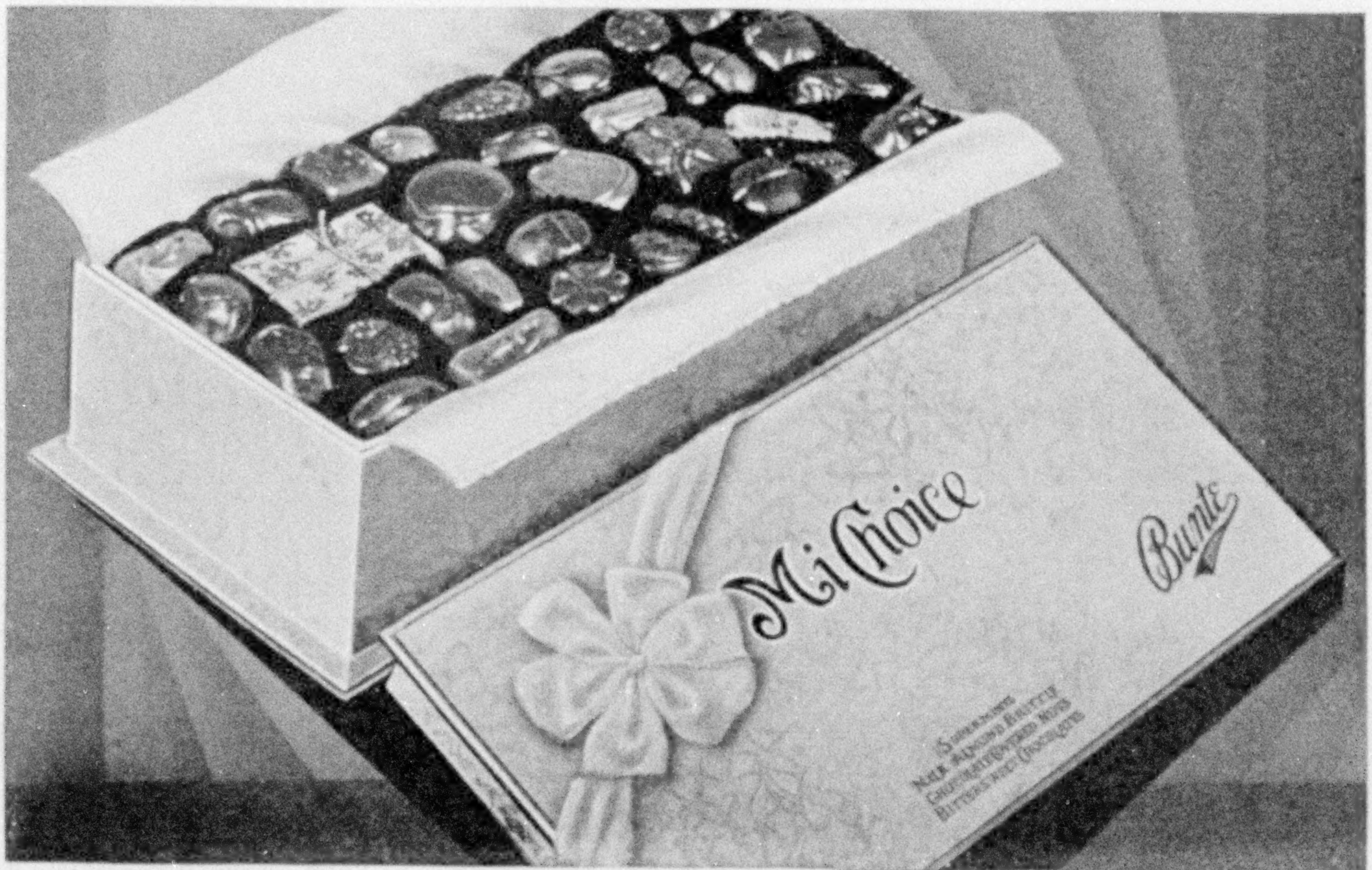

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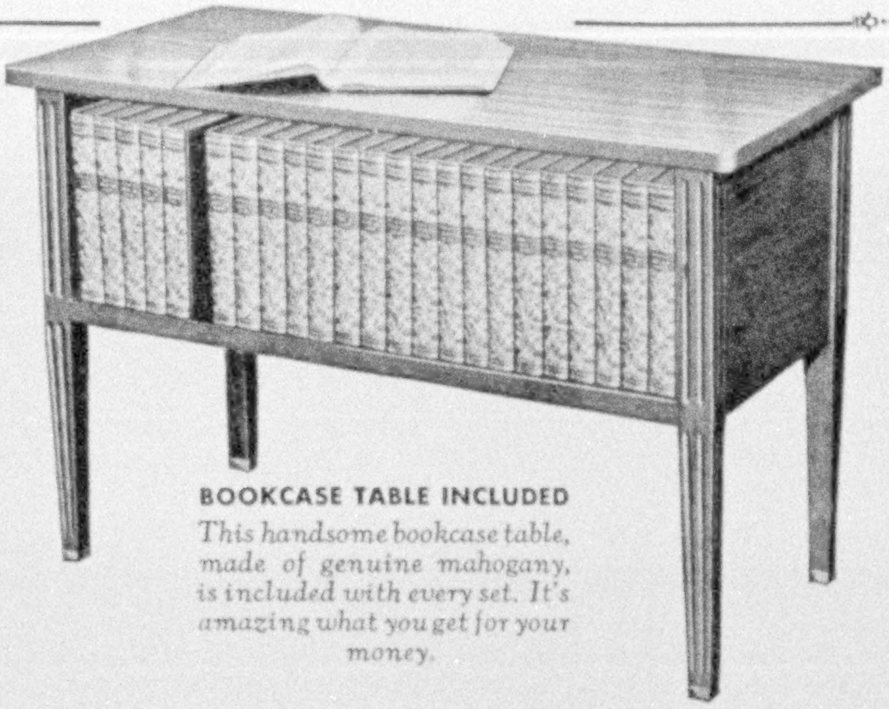

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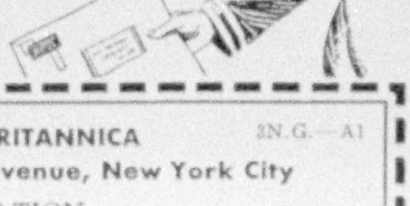

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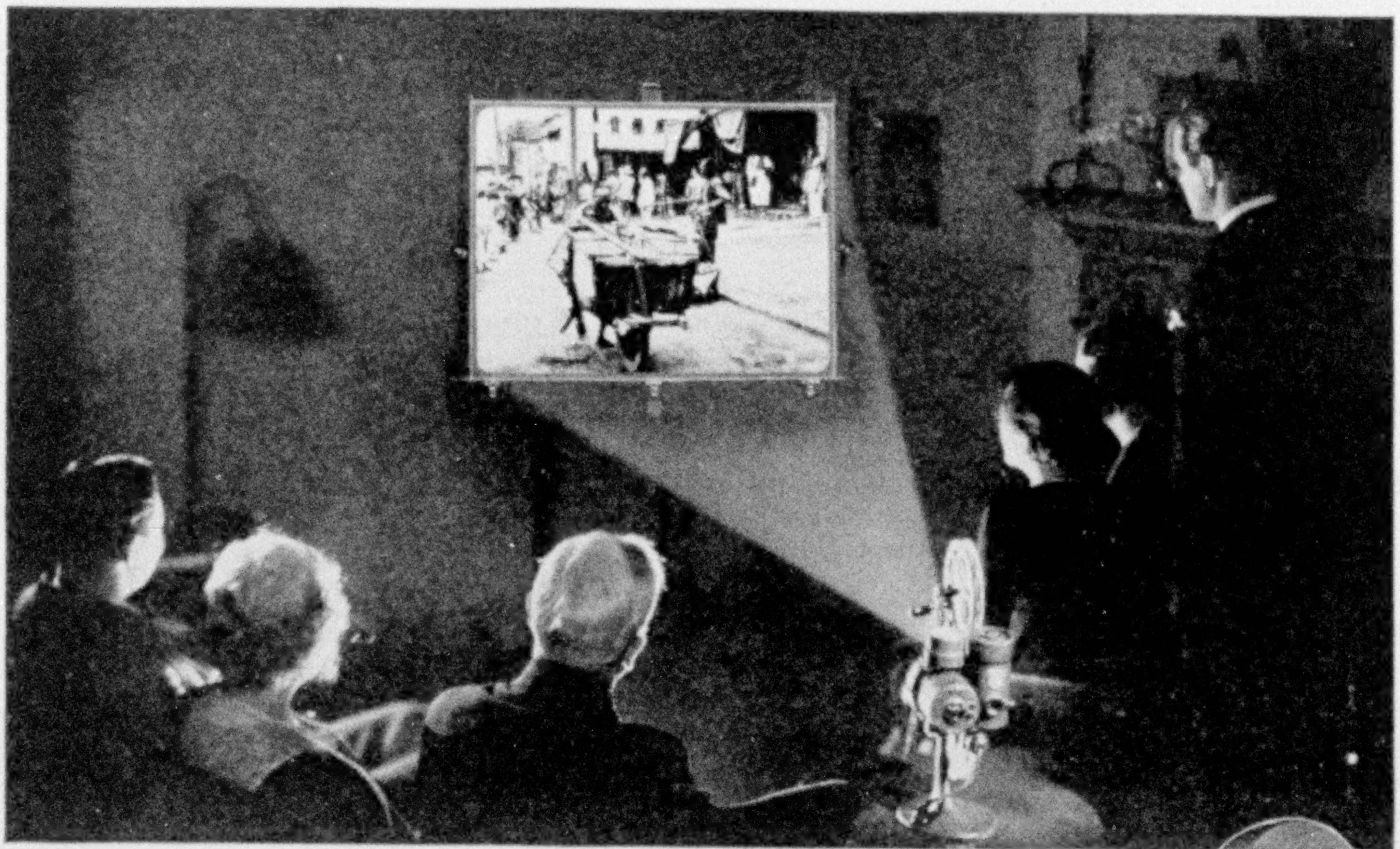

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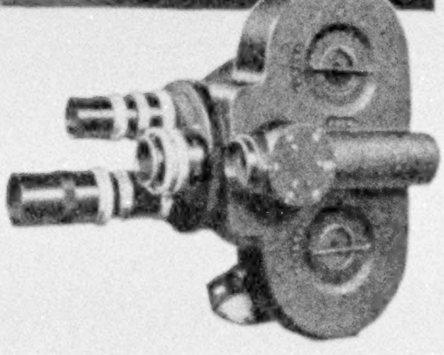

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For black and white pictures, Filmo cameras use Eastman Safety Film (16mm.) in the yellow box—both regular and panchromatic—obtainable at practically all dealers' handling cameras and supplies. Filmo cameras and Filmo Projectors are adaptable, under license from Eastman Kodak Company, for use of Kodacolor film for home movies in full color. Cost of film covers developing and return postpaid, within the country where processed.

BELL & HOWELL

FILMO

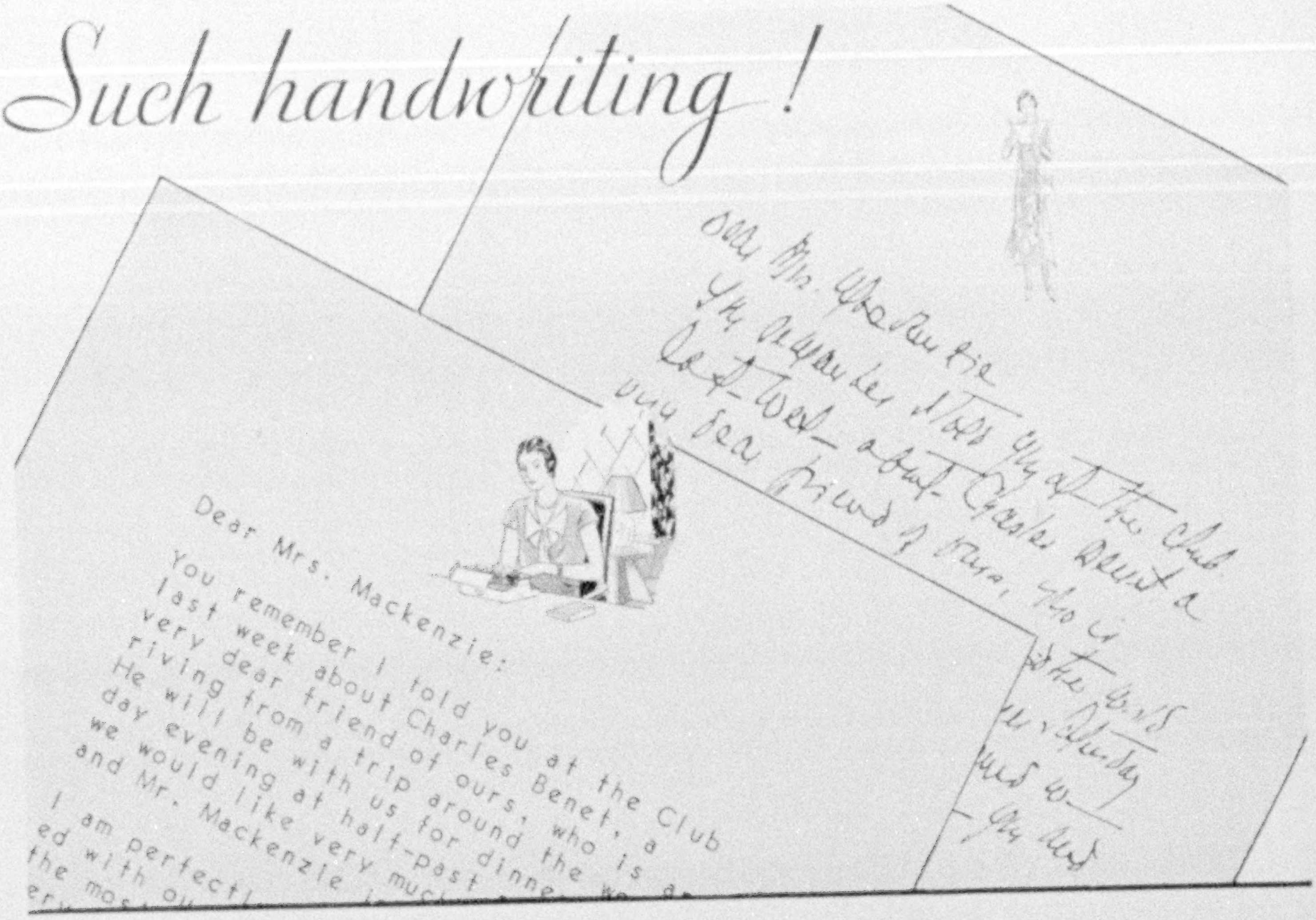
*Professional Results with Amateur Ease*

Bell & Howell Co., Dept. V, 1804 Larchmont Avenue, Chicago
New York, Hollywood, London (B. & H. Co., Ltd.) *Established 1907*

BELL & HOWELL
FILMO
AUTHORIZED DEALER

*Look for this Filmo sign—displayed by better dealers everywhere.*

# Such handwriting!



Dear Mrs. Mackenzie:

You remember I told you at the Club
last week about Charles Benet, a
very dear friend of ours, who is
riving from a trip around the
He will be with us for dinne
day evening at half-past
we would like very much
and Mr. Mackenzie

I am perfectl
ed with ou
the mos

## Someone should tell her about "Vogue" Type

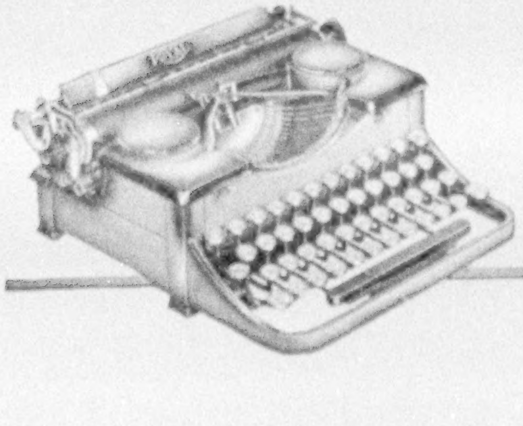
FANCIFUL scrawls. Curlicues. Beautiful but illegible handwriting! Why be embarrassed by it? Why permit your letters to be annoying puzzles to your friends . . . when it is so easy to use a Royal Portable Typewriter equipped with "Vogue?"

This new and charming type-face is most distinctive. It was created expressly for personal correspondence—just as the Royal Portable was designed to aid busy moderns who have neither time nor patience for the slow, wearisome pen! Original, of classical simplicity, "Vogue" is now the mode with discriminating people everywhere.

With a Royal Portable you write as you talk, directly and fluently. For your letters, for everyone's writings, it reflects the brilliance and sparkle of actual conversation. It is so amazingly simple to operate that even the most hesitant beginner becomes quickly familiar with the delightful convenience of its lively keys.

Graceful lines and cheerful Duotone colorings, which now include new Pastel tints of delicate softness, distinguish the Royal Portable as the finest of home-sized typewriters. Yet the price is only $60 complete with standard 4-bank keyboard and attractive carrying case. Convenient monthly payments, if desired.

ROYAL TYPEWRITER COMPANY, INC., NEW YORK CITY
*More than 2000 Royal Portable Dealers in the United States*



**Royal Portable**
**TYPEWRITERS**

# *The* Helpful Hand *for* Voyageurs Abroad

It is when you step ashore from the steamer's gangplank in a foreign port that the Helpful Hand of the American Express begins its important duty of making travel easier and simpler. Travelers always consult it about passport intricacies, hotels, railroads, steamships, and knotty travel problems.

It is a guarantee of carefree travel service and an automatic introduction is YOURS the moment you purchase American Express Travelers Cheques. Recognized and accepted for almost two generations, they have earned a popularity second only to America's own dollar bill. Issued in denominations of $10, $20, $50, and $100. Cost 75c for each $100. Sold by 22,000 Banks and the offices of American Express and Railway Express Agency.

*for safety and spendability*

**AMERICAN EXPRESS**

***Travelers cheques***

*Steamship tickets, hotel reservations, itineraries, cruises and tours planned and booked to any part of the world by the American Express Travel Department*

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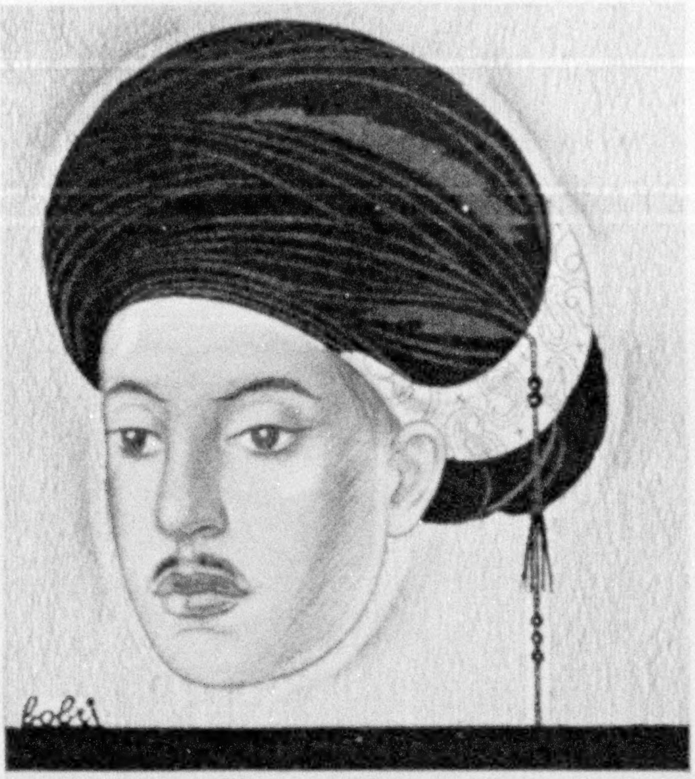


# AROUND THE WORLD
## TWO CRUISES

At your choice . . . two great opportunities to travel far and wide! The FRANCONIA . . . sailing EASTWARD . . . catering to every luxurious whim . . . a famous world-cruising ship . . . 138 wonderful days . . . places never before touched by a cruising ship . . . Madras . . . Belawan Deli . . . Kudat . . . Bali, without change of ship or extra cost. Samarang, Bangkok, the Philippines are other high spots. From New York Jan. 10, 1931; $2000 up.

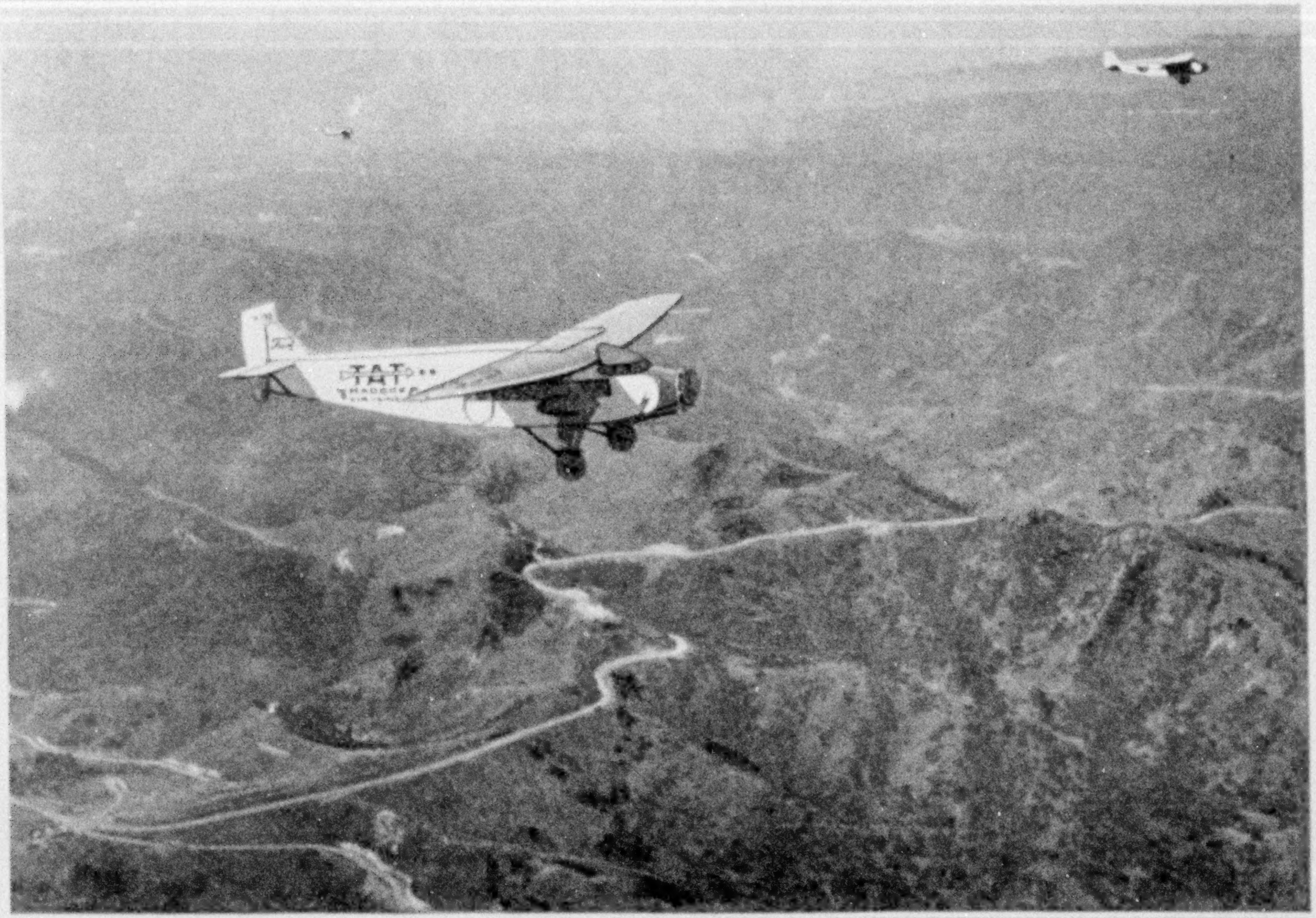
WESTWARD in the SAMARIA . . . popular transatlantic liner . . . supreme comfort . . . itinerary includes Bali, without extra expense . . . Samarang, Saigon, Bangkok. 127 days . . . at a radically low cost. $1600 up. From New York, Dec. 3; San Diego, Dec. 18; Los Angeles, Dec. 19; San Francisco, Dec. 21.

The success of both Cruises guaranteed by the combined resources and 179 years of experience of Cunard and Cook's.

Literature and full information from your local agent or

**CUNARD LINE**
**THOS. COOK & SON**

# NOW THAT EVERY ONE CAN FLY . . .



*The crowd travels where Ford planes fly*

WHEN the secretary of The Philadelphia Club of Advertising Women recently sent out notice to members that reservations were being made to attend a convention in Washington by airplane, her return mail brought 33 definite reservations from women. This appeared to be startling news to conservative old Philadelphia!

Comparison with other cities and other places brought forth the astounding fact that now the cost of air travel on most of the established passenger lines is no more on the average than train travel, suddenly the crowd has turned skyward.

Since the reduction in Air-Rail rates by T. A. T.-Maddux between New York and St. Louis, from $97.43 to $68, planes have been carrying capacity loads. On Colonial Airways between New York and Boston, where the rates went from $34.85 to $17.43, extra planes have been put in service. . . . Accommodation must now be ordered in advance for space on the popular transport planes of the Southwest Air Fast Express. . . . Up to February, the Oakland-San Francisco ferry plane, flying at fifteen-minute intervals, carried 18,000 passengers at $1.50 fare. . . . The Stout Air Lines have been flying from Detroit with the regularity and dependability of trains, crowded. . . . Almost every transport line reports the same extraordinary upward trend in air travel!

*A great number of planes in use on passenger air lines are Ford tri-motored, all-metal planes, preferred by passengers everywhere because of their safety and stability.*

## FORD MOTOR COMPANY

*Visitors are always welcome at the Ford Airport at Detroit*

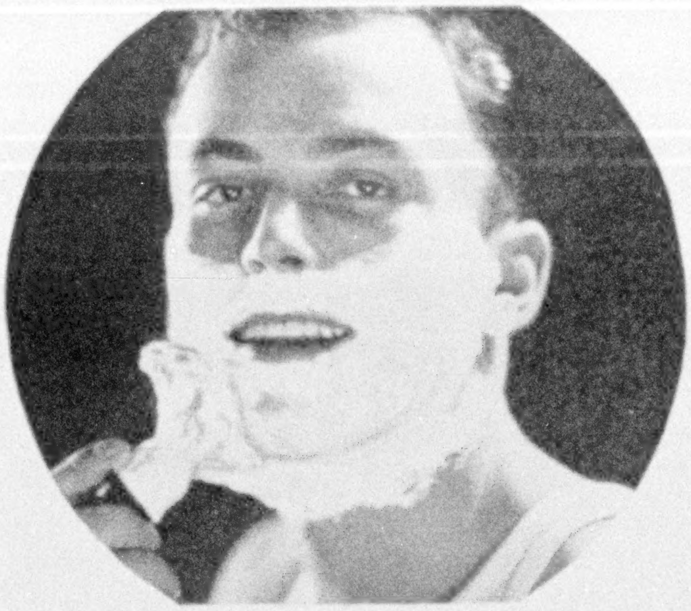
## *The Ford Plane*

The Ford plane is planned, constructed and operated as a commercial transport. Built of corrugated aluminum alloys, it has great structural strength, unequaled durability, and is most economical to maintain in operation. The uniformity of its material is determined by scientific test. All planes have three motors in order to insure reserve power to meet and overcome all emergencies. The engines may be Wright, Pratt & Whitney or Packard Diesel, totaling from 675 to 1275 horse-power. Ford planes have a cruising range of from 580 to 650 miles and a speed range of 55 to 135 miles per hour. Loads may be carried weighing from 3630 to 6000 pounds.

The capacity of these planes is 9 to 15 passengers and a crew of two (pilot and assistant). Planes can be equipped with a buffet, toilet, running water, electric lights, adjustable chairs.

The price of the Ford tri-motored, all-metal plane is exceptionally low—$40,000 to $50,000 at Dearborn.

Ford branches will be glad to give you information on all Ford tri-motored, all-metal planes.



# Will you risk a stamp

## to gain new shaving ease?

*Note the coupon, please*

GENTLEMEN: We have a product that you will want to know about. But we find difficulty in advertising it, for the truth would sound extravagant to many.

Yet we are confident of its many superiorities. For we find that 86% of those who try it use it and discard all other ways. They have made it the largest selling shaving cream in the world.

This product is Palmolive Shaving Cream, different in action and effect from any you have ever known. To introduce it, we offer a free 7-day test. *We* take the risk of convincing you. Fair-minded men by the million have tried it at our invitation.

If you do not know Palmolive Shaving Cream, will you test it, please? A coupon is printed below for your convenience. Simply mail it, and make the trial to convince yourself.

PALMOLIVE RADIO HOUR—Broadcast every Wednesday night—over WEAF and 39 stations associated with The National Broadcasting Co.

PALMOLIVE
Shaving Cream
35¢
5815

7 SHAVES FREE

**and a can of Palmolive After Shaving Talc**

Simply insert your name and address and mail to Palmolive, Dept. M-852, P. O. Box 375, Grand Central Post Office, New York City.

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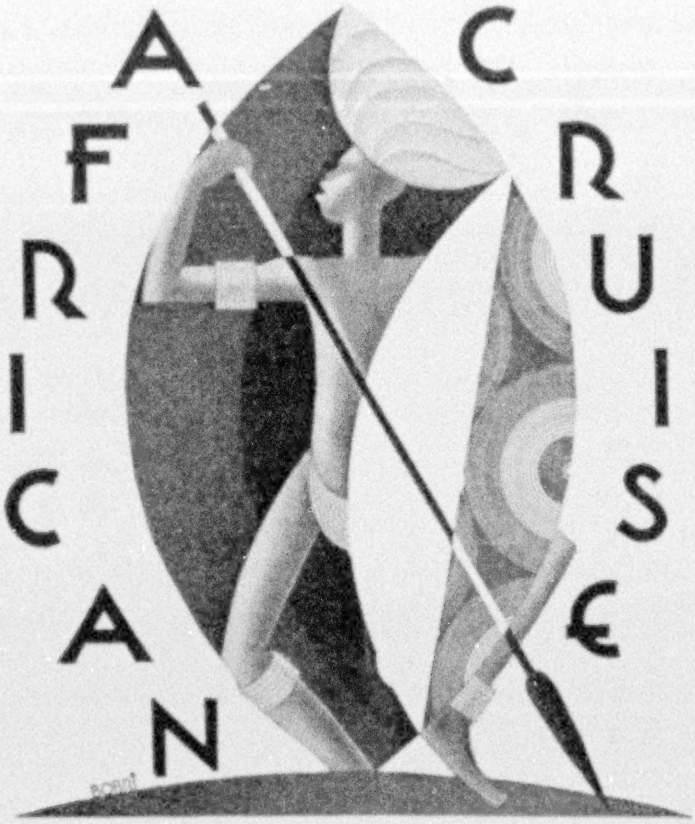
(Please print your name and address)

# THE GREAT 1931 AFRICAN CRUISE



There's a primitive something in us that tingles at the glamorous word . . . AFRICA. Tomtoms throbbing in the bush . . . the calm majesty of the veld . . . the wild ruggedness of mountains.

It's the continent of contrasts, yet with all her modernness, Africa gives one something to treasure, a richness of experience that is Africa's own and a climate that is without question the world's most healthful.

The S. S. Transylvania, a first-class transatlantic liner, leaving New York Jan. 17, 1931, returning to New York April 24, 1931 . . . first visits Trinidad, then South America . . . then on to Africa with a 3,359 mile optional railway trek from Cape Town inland . . . and then the Mediterranean . . . Three cruises in one. You travel as you live, leisurely and in complete home comfort. Rates $1450 up.

Send for booklet to your local agent or

**CUNARD ANCHOR LINES**
25 BROADWAY, N. Y. C.

**AMERICAN EXPRESS CO**
65 BROADWAY, N. Y. C.

NO. 3 OF A SERIES

THIS series of advertisements is designed to acquaint business men with Grinnell Company as it really is. Automatic Sprinkler protection for which it first won international fame and leadership is not the chief business of the Company. Its equally high reputation for many other industrial piping specialties and commodities has been built on super-standards of manufacture and on original conceptions which are well known to engineers and architects. Business men, too, need to know the real quality in these products.

# THERMOFLEX
## RADIATOR TRAP
### for instance

DO you know of any device which would be *destroyed* while it was being made, if there was the slightest weakness anywhere in its structure?

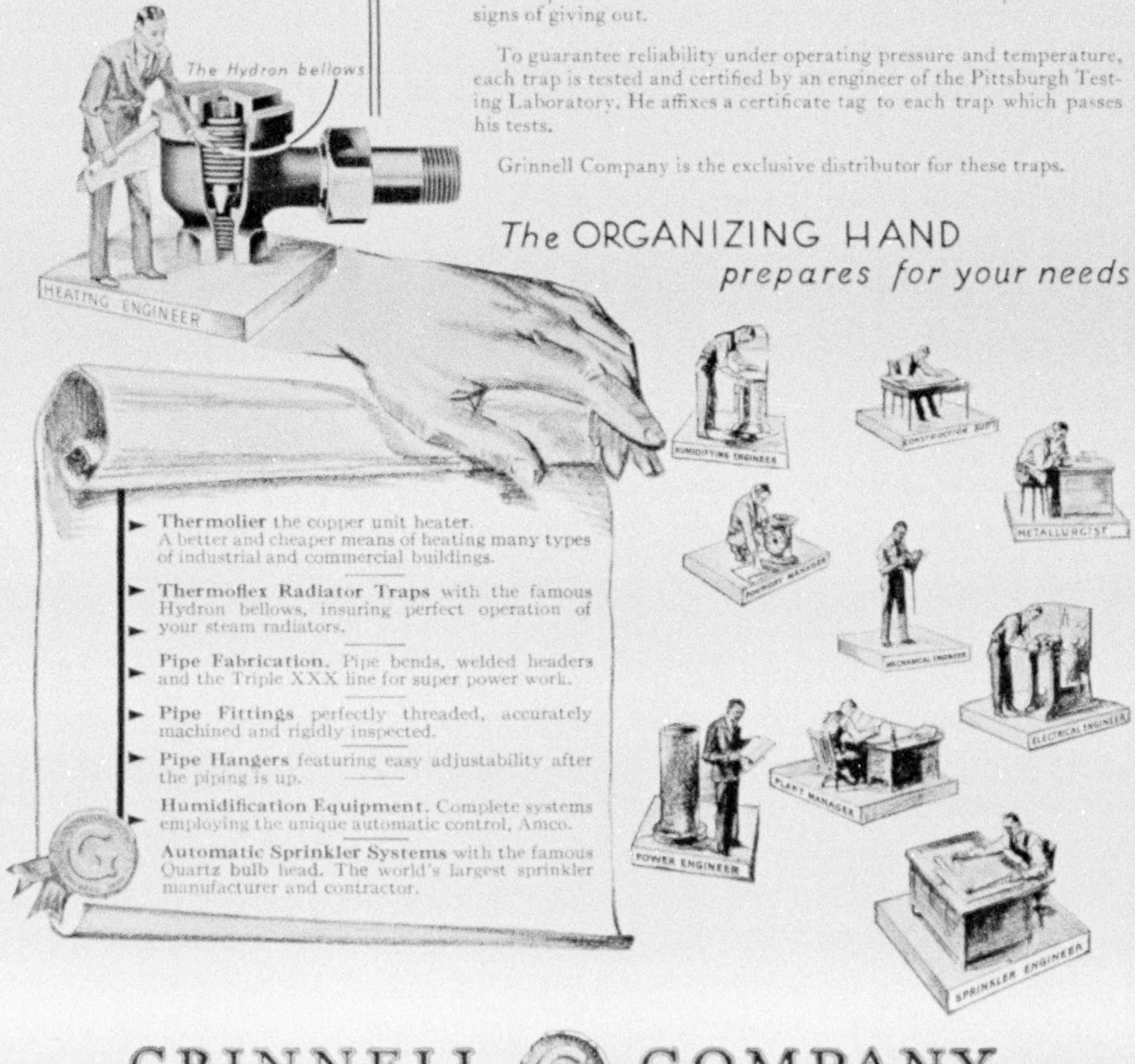
Each Hydron bellows in Thermoflex steam traps is made by internal hydraulic pressure, which tests its structure—infallibly. So you have a guarantee of strength of each trap on each radiator far beyond any demands in actual use.

The heart of a Thermoflex trap is this strong, quick acting bellows. It will open and close the drain orifice millions of times a year with no signs of giving out.

To guarantee reliability under operating pressure and temperature, each trap is tested and certified by an engineer of the Pittsburgh Testing Laboratory. He affixes a certificate tag to each trap which passes his tests.

Grinnell Company is the exclusive distributor for these traps.

## *The* ORGANIZING HAND
### *prepares for your needs*

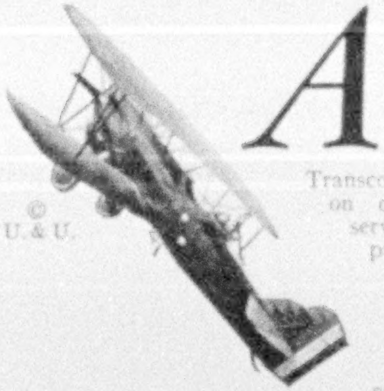


- **Thermolier** the copper unit heater. A better and cheaper means of heating many types of industrial and commercial buildings.
- **Thermoflex Radiator Traps** with the famous Hydron bellows, insuring perfect operation of your steam radiators.
- **Pipe Fabrication.** Pipe bends, welded headers and the Triple XXX line for super power work.
- **Pipe Fittings** perfectly threaded, accurately machined and rigidly inspected.
- **Pipe Hangers** featuring easy adjustability after the piping is up.
- **Humidification Equipment.** Complete systems employing the unique automatic control, Amco.
- **Automatic Sprinkler Systems** with the famous Quartz bulb head. The world's largest sprinkler manufacturer and contractor.

# GRINNELL COMPANY

*Branches in all Principal Cities*

Executive Offices: Providence, R. I.


© U. & U.

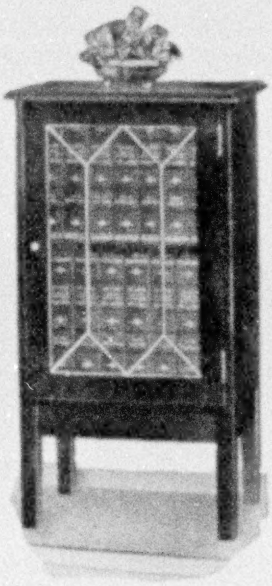
*The World Takes to the*

*AIR!*

Transcontinental passenger planes on daily schedule—transatlantic service soon to be open to the public—radio programs from the clouds — new motors, new equipment, new methods daily making aviation a more important part of YOUR life! How can you keep abreast of these amazingly rapid developments, and of progress in all other fields of thought and activity, except with

The Encyclopaedia that NEVER Grows Old

NELSON'S is brought right up to date for you *every six months* with new pages which are sent to every subscriber to take the place of out-of-date pages. Only with a LOOSE-LEAF Encyclopaedia is this possible. And this simple and easy replacement of pages gives you *a new edition every six months!*


Size of Case 36"x30"

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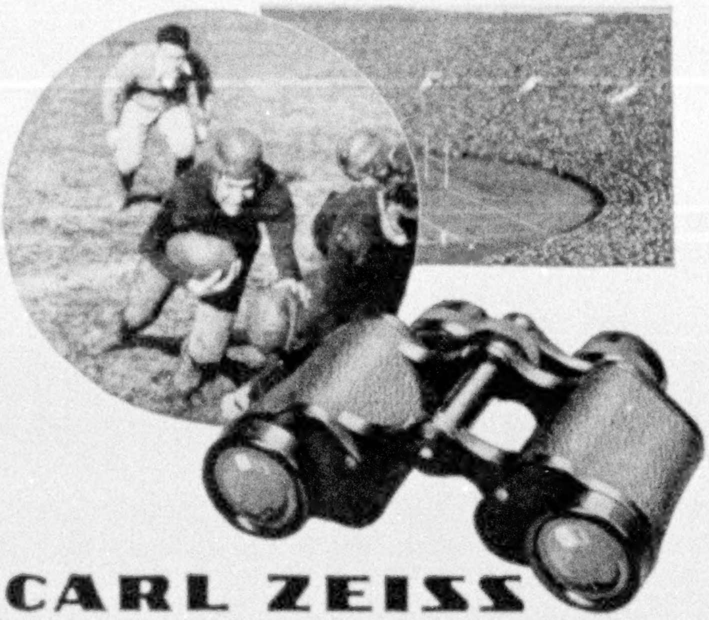
Address ______________________

City ______________ State ______________



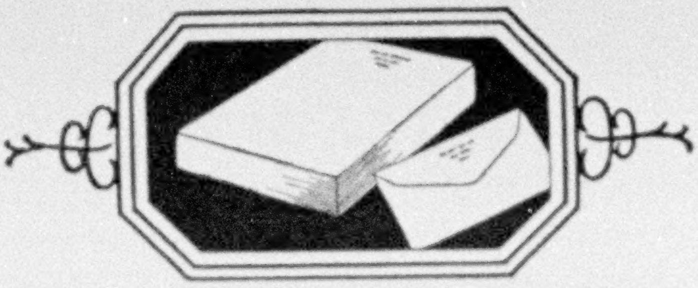
**CARL ZEISS**
**BINOCULARS**

*A thrilling close-up of every play!*—You're right on the side-lines when you have a Zeiss Binocular! You see exactly how each play is made. Details stand out with astonishing clarity, and the Zeiss wide field of view makes it easy to follow the players.

At leading dealers. Write for literature.

CARL ZEISS, INC., 485 FIFTH AVENUE, NEW YORK
728 South Hill Street, Los Angeles

CARL ZEISS JENA



**Printed Stationery**
**Long Style Sheets · · $2**

The American Stationery "De Luxe Package" of 125 sheets, size 6⅝ by 10¼, and 125 envelopes—*all tastefully printed with your name and address*—is an extraordinary value at $2.00. The quantity is so big, the quality so good and orders are filled so promptly you are sure to be pleased. In fact, we guarantee it—or your money immediately refunded. A copy of our guarantee is filed with the National Geographic. Send $2 for a package, delivered postpaid. YOU'LL NEVER BE SORRY.

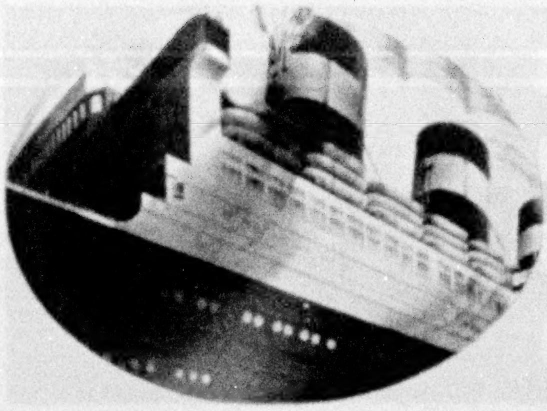
We also manufacture the famous printed package of 200 note sheets (size 6 x 7) and 100 envelopes—all neatly printed with your name and address (as described over Station WLW). Price, postpaid **$1**

*The* AMERICAN
STATIONERY COMPANY
PERU, IND.
300 PARK AVENUE

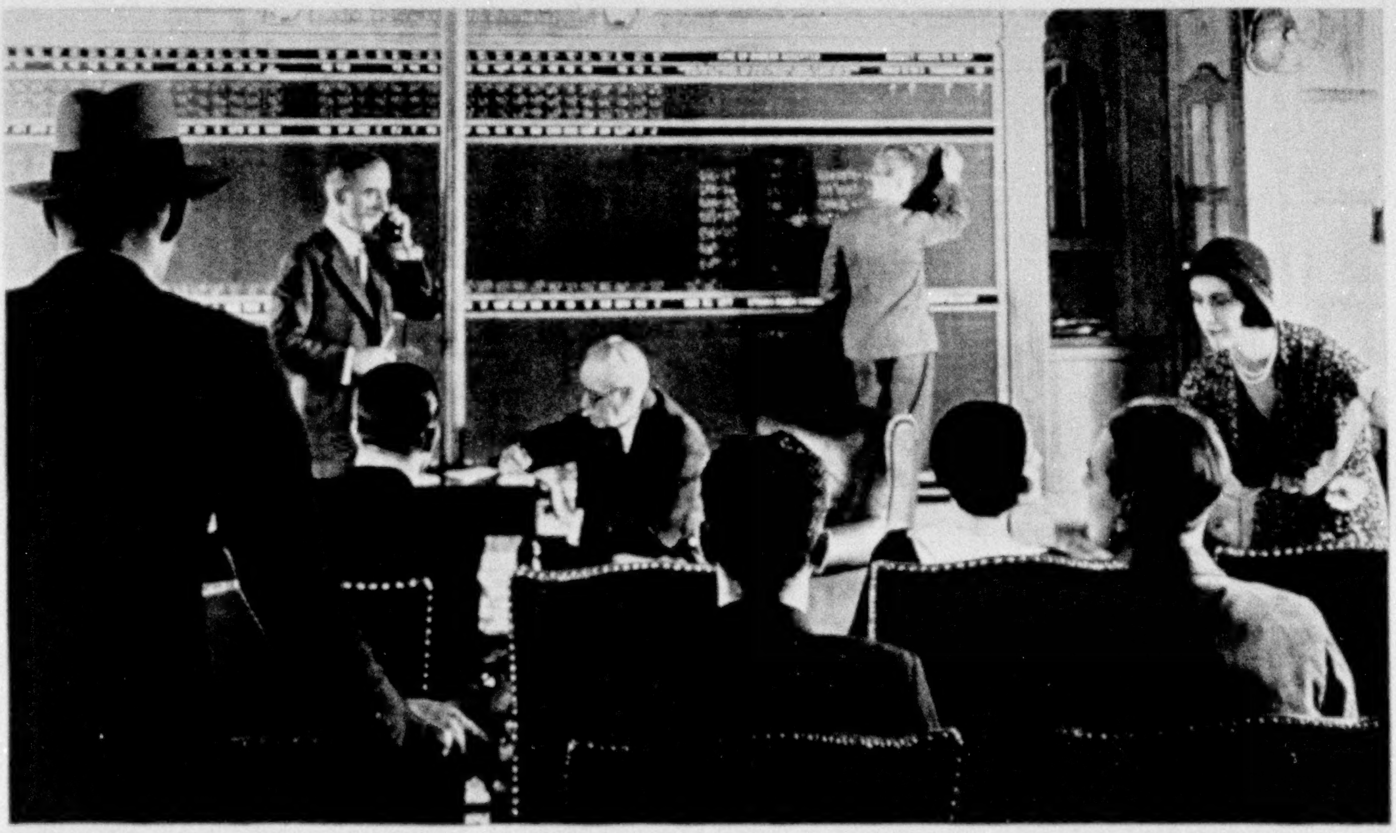
**LISTEN** to the humorous and enlightening observations on "events of the day, with their relation to the past and their bearing on the future"—brought to you by Frederick Landis, in his amusing program, "The HOOSIER EDITOR," every Friday evening at 8:30 Eastern Standard Time, over **STATION WLW**

## WALL STREET STRETCHES TO CHERBOURG . . .

## WHEN YOU TAKE THE LEVIATHAN!



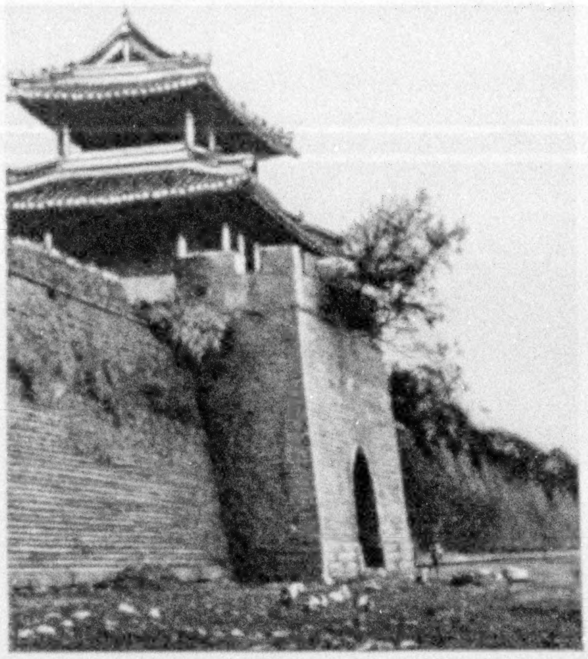
The eternal question "I wonder what the market is doing?" need never cause you a moment of uneasiness on the broad Atlantic. Take the World's Largest Ship, LEVIATHAN . . . a complete brokerage office . . . facilities for trading . . . continuous quotations by radio telephone . . . the telltale blackboard . . . a telephone a few paces away for private consultation with your banker or broker at home. For your leisure . . . brilliant Club Leviathan . . . marvelous Ben Bernie dance orchestra . . . "Talkies" . . . Pompeian Pool . . . complete gymnasium . . . golf, tennis, ping pong . . . staterooms that are revelations in spaciousness . . . a cuisine that numbers every world delicacy and respects your love of fine coffee. For complete comfort at low cost, take the "Famous Five"—GEORGE WASHINGTON, AMERICA, REPUBLIC, PRESIDENT HARDING and PRESIDENT ROOSEVELT.



# UNITED STATES LINES

— PAUL W. CHAPMAN, PRESIDENT —

For complete information see your local agent or our offices: New York, 45 Broadway; Atlanta, 714 Healy Building; Boston, 75 State St.; Chicago, 216 N. Michigan Avenue; Cleveland, Hotel Cleveland Building; Detroit, 1514 Washington Boulevard; St. Louis, Jefferson Hotel; Philadelphia, 1600 Walnut Street; San Francisco, 691 Market Street; Los Angeles, 756 South Broadway; Minneapolis, 312 Second Avenue, South; Seattle, 1337 Fourth Avenue; Pittsburgh, 705 Liberty Avenue; Washington, 1027 Connecticut Avenue; Little Rock, Wallace Building; New Orleans, Hibernia Bank Building. Berlin, Unter den Linden 9; Hamburg, Cor. Alsterthor & Ferdinandstrasse; London, 14 Regent Street, S. W. 1.; Paris, 10 Rue Auber. THESE LINES OFFER A COMPLETE FREIGHT SERVICE — SPECIFY AMERICAN SHIPS FOR YOUR FOREIGN TRADE.



ADVENTURERS ALL - - - - - -
TOWARD MANY-HUED ROMANCE

Balboa stared with saddened eyes at the Pacific . . . the mighty barrier to the Indies . . . but you will speed over the Pacific in modern comfort and gaiety. Vasco da Gama strove with stern foes in the Orient . . . but you will find friendly peoples and contemporary diversions and buy little marvels of art. Japan . . . the cycle of blossoms . . . golf and tennis in enchanting backgrounds. China . . . the majesty of Peking . . . the cosmopolitan life of Shanghai and Hongkong.

How pleasantly you adventure in luxurious ease and modern splendor in the world-circling fleet of the N. Y. K. Line to

JAPAN, CHINA AND THE PHILIPPINES,
With Stop-over at Honolulu

Here you find the luxury of magnificent suites, the refreshment of swimming pools, and the exercise afforded by well-equipped gymnasiums. You dine from an exquisite cuisine, served by English speaking stewards, and find delight in a gay shipboard life.

Regular sailings from San Francisco and Los Angeles, $300 up. From Seattle and Victoria direct to the Orient, $195 up. *** Round-the-World in either direction with privilege of stop-over, $993 up, including rail fare. *** Around-the-Pacific Tours. Rates from $813.70 up.

*For detailed information, sailing schedules and descriptive literature, write Dept. 9*

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**LINE**

"Financial Health" Today
*will enable you*
to Retire Tomorrow

ALL men look forward to the day when they can retire. Too few ever plan or carry out a definite investment program that will enable them to do so.

It is such a plan that we call "financial health." And it is our business to help you find "financial health" . . . to help you work out a plan that fits your individual needs and aspirations.

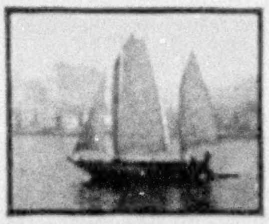
We should like to have you stop in at any one of our 49 offices for a personal consultation.

If this is not convenient, we shall be very glad to give you what advice and coöperation we can by mail. We have prepared an investor's information blank which you can fill in easily in a few minutes. This will give us the information we need to advise you. Send for a blank today . . . and a free copy of our interesting new booklet, "The Road to Wealth."

S. W. STRAUS & CO.
*ESTABLISHED 1882* *INCORPORATED*
INVESTMENT SECURITIES
*Dept. No. N-111 565 Fifth Ave., N.Y.C. PLAza 4200*

Show Your Travels on the Screen

A complete condensed record of your travels . . . of all nature's beauty. That's the Memo camera's work. No gaps. Nothing missing. The Memo gets everything. It gives thumbnail prints for illustrating letters . . . enlargements for the album . . . and complete reels, with titles, to show on the screen. Your personal newsreel. A 500-picture record with $5 worth of film. No bother. 50 pictures without reloading. A twick of the thumb advances the film. Spyglass finder. No traveler should be without a Memo — the pocket camera with hundreds of uses beyond the scope of other cameras. Travel with the Memo and get the pictures that others miss.



*Memo picture size*

Memo camera only $20.

Mail this Coupon

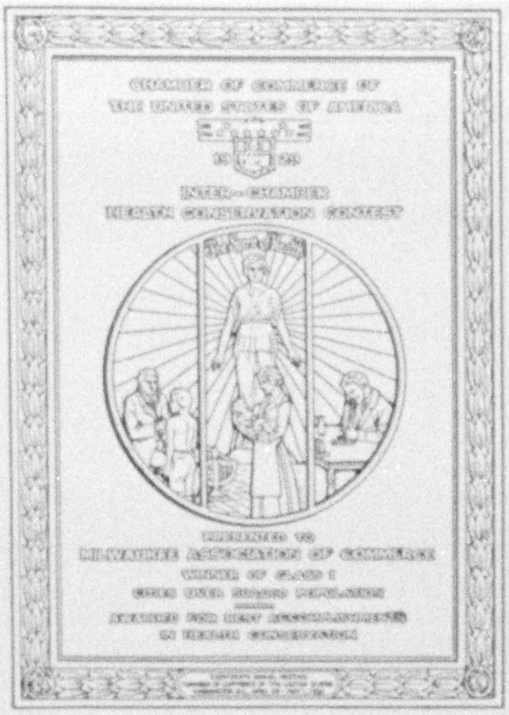
AGFA ANSCO OF BINGHAMTON, N. Y.

Please send me free 56-page Memo handbook

Name ____________________

Address ____________________

# "Business is Business"


CHAMBER OF COMMERCE OF
THE UNITED STATES OF AMERICA
INTER-CHAMBER
HEALTH CONSERVATION CONTEST
PRESENTED TO
MILWAUKEE ASSOCIATION OF COMMERCE
WINNER OF CLASS I
AWARDED FOR BEST ACCOMPLISHMENTS
IN HEALTH CONSERVATION

*Sketched from Bronze Plaque Awarded to*

FIRST PRIZE WINNERS

*in the Inter-Chamber Health Conservation Contest held under the auspices of*

THE CHAMBER OF COMMERCE
OF THE UNITED STATES OF AMERICA

| | |
|---|---|
| MILWAUKEE, WISCONSIN . .<br>Cities more than 500,000 | CLASS 1 |
| SYRACUSE, NEW YORK . . .<br>Cities 100,000 to 500,000 | CLASS 2 |
| EAST ORANGE, NEW JERSEY .<br>Cities 50,000 to 100,000 | CLASS 3 |
| WHITE PLAINS, NEW YORK .<br>Cities 20,000 to 50,000 | CLASS 4 |
| SIDNEY, OHIO . . . . . .<br>Cities under 20,000 | CLASS 5 |

SOME years ago it was thought that Big Business had to be hard-hearted in order to be successful. Today, people know better and employers have learned that they get more faithful service and are more successful if their employees are contented and healthy.

Today we take comfort in the assurance that medical and health scientists, philanthropists and humanitarians have the solid backing and support of the biggest business men in the country. And, modestly, Big Business gives as its reasons for lending its powerful, invaluable support—"business is business".

Cities which have promoted and are promoting far-sighted health programs are reaping rich rewards. Their citizens are happier and their cities offer attractions to new industries and to people of wealth and leisure.

When the Chamber of Commerce of the United States offered prizes last year to cities which would do most to improve health and sanitary conditions, 140 cities entered the National Health Conservation Contest. This year it is expected that a larger number will compete for the Bronze Awards.

Statisticians estimate that there is an annual loss in the United States of billions of dollars due to the needless loss of lives. When these lives of valuable workers are sacrificed, their families suffer and the cities in which they live are made poorer.

THE LIGHT THAT NEVER FAILS

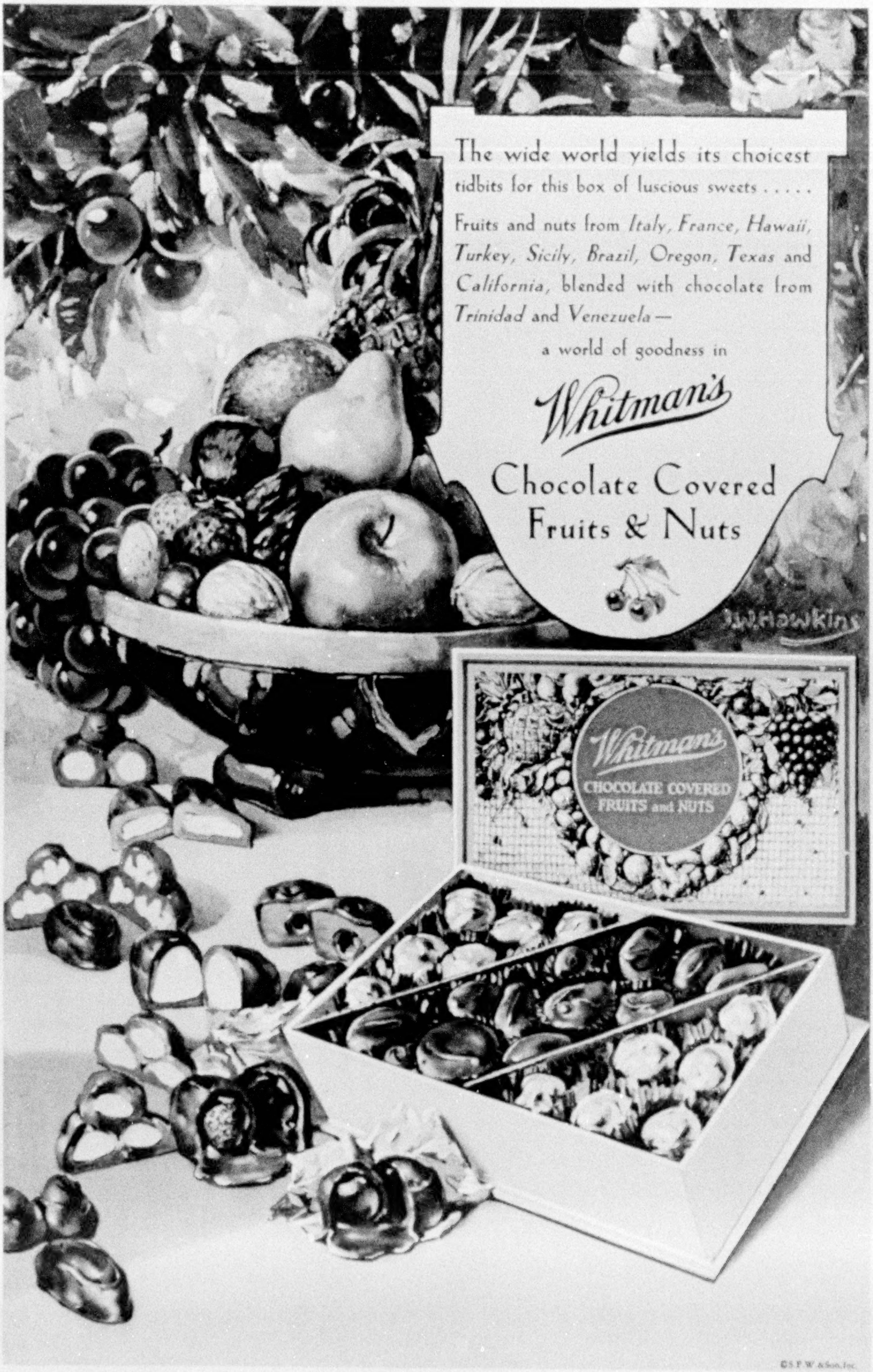
If you live in a city which wants to reduce its deathrate, your city's business organization (Chamber of Commerce or Board of Trade) may obtain the active cooperation of America's greatest business organization, the Chamber of Commerce of the United States.

Last year health experts visited 80 of the cities which entered the National Health Conservation Contest. Your community may obtain the advice of such expert health counsel as may be needed, free of charge. A trained health expert will visit your city and search for danger spots. He will make recommendations for a constructive health improvement program which you can help to carry out.

For full information regarding health programs and the National Health Conservation Contest, the Secretary of your Chamber of Commerce or other similar body should address the Secretary of the Chamber of Commerce of the United States at Washington, D. C.

## METROPOLITAN LIFE INSURANCE COMPANY

FREDERICK H. ECKER, PRESIDENT — ONE MADISON AVE., NEW YORK, N. Y.



The wide world yields its choicest tidbits for this box of luscious sweets . . . . .

Fruits and nuts from *Italy, France, Hawaii, Turkey, Sicily, Brazil, Oregon, Texas* and *California,* blended with chocolate from *Trinidad* and *Venezuela* —

a world of goodness in

**Whitman's**

Chocolate Covered Fruits & Nuts

J.W.Hawkins
Whitman's
CHOCOLATE COVERED FRUITS and NUTS

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# THE GLORIES OF THE MINYA KONKA

## Magnificent Snow Peaks of the China-Tibetan Border Are Photographed at Close Range by a National Geographic Society Expedition

By Joseph F. Rock

Leader of the National Geographic Society Yünnan-Szechwan Expedition, 1927-1930; Author of "Seeking the Mountains of Mystery," "Life Among the Lamas of Choni," "Through the Great River Trenches of Asia," etc., in the National Geographic Magazine

*With Illustrations from Photographs by the Author*

STRANGE as it may seem, hoary old China still holds within its borders vast mountain systems wholly unknown not only to the Western World, but to the Chinese themselves.

Tatsienlu, Szechwan Province, great border gateway to Tibet, has been visited by many travelers coming from the east; but, previous to my visit, only two or three had crossed south to the borders of Yünnan Province. Meager references only had been made to a high mountain range to the south of Tatsienlu, usually by travelers passing west of Tatsienlu on their way to Batang. It remained for a National Geographic Society expedition to locate definitely that stupendous range called Minya Konka, photograph every one of its peaks, map them, and explore their slopes for plants, birds, and animals.

Once, while in Chengtu, I was told by missionaries of a high mountain to the south, which could be seen on clear days from the Chengtu Plain. I was asked if that could be the mountain that General Pereira had in mind when he spoke of a high range which he thought came a close second to Mount Everest. I was able to dispel that idea, for the mountain General Pereira spoke of to me was none other than the Amnyi Machen, west of the Yellow River, whither I was then bound.*

In June of 1928, while exploring the Konkaling snow peaks to the northwest of Muli, I beheld from a ridge, at 16,300 feet elevation, a series of snowy ranges, one of special interest far to the northeast. My Tibetan guides said this was Minya Konka, and another, nearer at hand and to the south of Minya Konka, they called Muti Konka.

### EQUIPMENT FOR SEVEN MONTHS' FIELD WORK

I did not then connect Minya Konka with any mountains which might be seen from Chengtu and about which missionaries had told me. Being more than 100 miles distant, as the crow flies, from where I stood, the range was visible only with my field glasses; but there loomed up a white pyramid from its southern end which made me gasp, and I decided then and

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* See "Seeking the Mountains of Mystery," by Joseph F. Rock, in the National Geographic Magazine for February, 1930.

THE CAMP OF THE SOCIETY'S EXPEDITION IN THE ALOCHING ALPINE MEADOW, NORTH OF KULU

there to spend the following year exploring Minya Konka.

Our party left Ngulukö (see map, page 388), headquarters of the National Geographic Society expedition, in March, 1929. We had 46 mules and more than 20 Nashi men, with supplies for seven months. Furs, heavy shoes, and warm bedding were provided for the men, as we expected spring snow, especially in the north. We also took five tents, folding chairs, and table, camp cot, and many trunks with photographic supplies, cut films and color plates, developer, coffee, tinned milk, tea, cocoa, butter, flour, salt, sugar, and some tinned vegetables, for the grass-land Tibetans are strangers to vegetables, fruits, and sugar.

The men carried brick tea and yak butter, large, dirty lumps of salt, Chinese brown sugar, and large supplies of native flour to make their *baba*, sometimes shaped into round loaves and sometimes into cornucopias, which they steamed to a large dumpling in a covered pot over a wood fire.

We took quantities of paper made out of bamboo, to be used as blotters for drying botanical specimens; two large boxes packed tight with ginned cotton to protect birdskins, and boxes of a white-fiber paper made in Hoching, south of Likiang, in which to pack the dried plant specimens.

Last but not least, our equipment included our trunk of medicines. I was anxious to guard against the fatal relapsing fever so prevalent in Tibetan country, for during the previous season I had lost two muleteers from that dreadful contagious disease after an illness of only three days.

One needs to be a good housekeeper indeed to prepare for such a caravan. I even took horsebeans, for in that region horses live almost exclusively on a dry-bean diet, with an occasional bit of barley flour, salt, and butter.

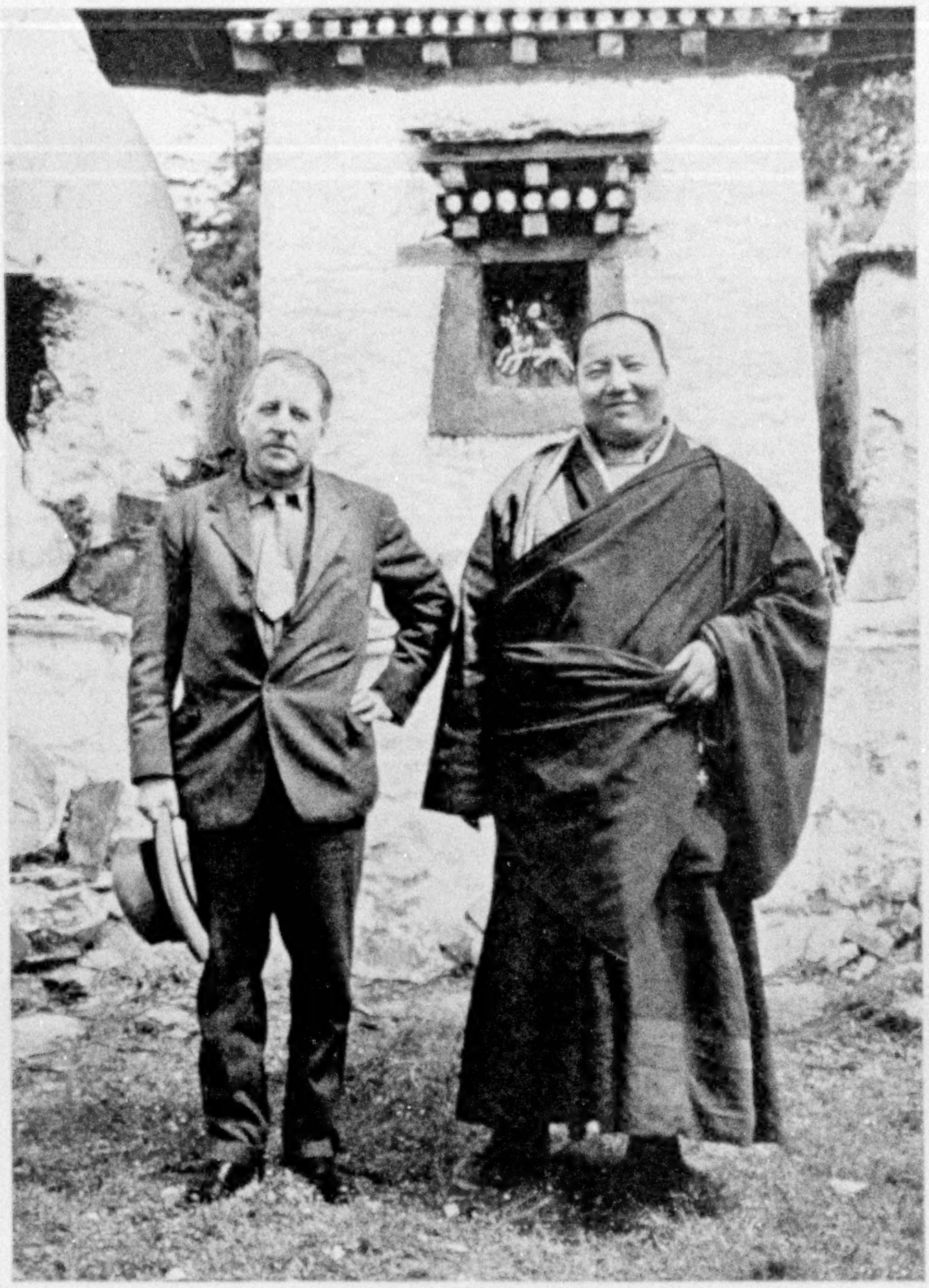
Thus equipped, we made our way to Muli monastery, and thence to Kulu, where the Muli king resided. On our arrival snowstorms broke; so we camped for a week while awaiting better weather for the journey north.

### GUEST OF THE KING OF MULI

I visited the King of Muli nearly every day, having luncheon with him—he at his small table and I at mine. There would be fried eggs, bits of mutton, beef, Chinese noodles, rice, and always a bowl of sour yak cream and melted yak butter, of which the king is inordinately fond. I spoke in Chinese, which was interpreted to the Tibetan potentate.

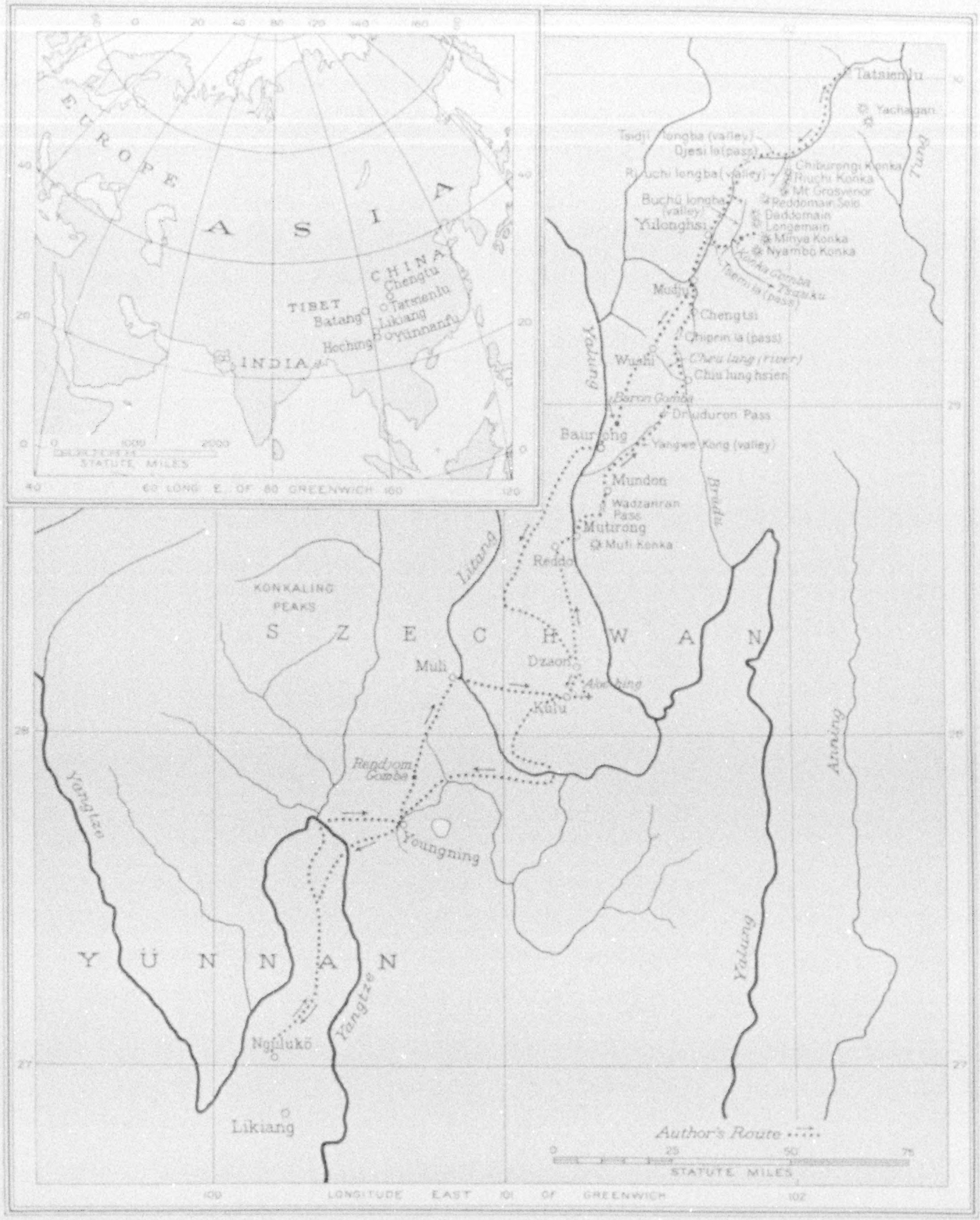
The poor secretary-interpreter, the only lama in Kulu who could speak Chinese, often stood for hours with folded hands and bowed head, even during the luncheon, until one day I said, "Poor Mr. Tung must certainly be hungry." Whereupon the king laughed and, taking in his fingers the odds and ends left upon his plate, placed the collection before the interpreter, as if he were feeding his favorite dog, and motioned to him to sit on the floor and regale himself on the royal leavings. There are certain other royal leavings which may better remain unnamed, but which are molded into pills, gilded, and dispensed among the peasants to prevent illness.

The king's uncle, a dried mummy, plastered and gilded, sat in a golden chorten (shrine) in the same room where we had lunch. The king explained, "My uncle, he died sixty years ago." Thus royalty in Muli is never lonely, but always has company, although not of a very talkative type!



THE KING OF MULI MAKES THE AUTHOR WELCOME

Dr. Rock and the Asiatic potentate are standing in front of the monastery at Kulu. The success of the National Geographic Society's expedition to the Minya Konka was due in large measure to the friendly coöperation of this absolute monarch of a small kingdom on the China-Tibetan border (see, also, "The Land of the Yellow Lama," by Joseph F. Rock, in the NATIONAL GEOGRAPHIC MAGAZINE for April, 1925).


EUROPE
ASIA
CHINA
TIBET
Chengtu
Tatsienlu
Batang
Likiang
Heching
Yünnanfu
INDIA
STATUTE MILES
LONG. E. OF GREENWICH
Tatsienlu
Yachagan
Tung
Tsidji longba (valley)
Djesi la (pass)
Riuchi longba (valley)
Chiburongi Konka
Riuchi Konka
Mt Grosvenor
Reddomain Solo
Buchü longba (valley)
Yulonghsi
Daddomain
Longemain
Minya Konka
Nyambo Konka
Konka Gomba
Tsemi la (pass)
Tsaaku
Mudju
Chengtsi
Chiprin la (pass)
Wushi
Cheu lang (river)
Chiu lung hsien
Yalung
Baron Gomba
Druduron Pass
Baurong
Yangwe Kong (valley)
Mundon
Wadzanran Pass
Mutrong
Muli Konka
Bradu
Reddo
Litang
KONKALING PEAKS
SZECHWAN
Muli
Dzaon
Abe bing
Kulu
Anning
Rendjom Gomba
Yangtze
Youngning
YÜNNAN
Yalung
Ngululkö
Yangtze
Likiang
Author's Route
STATUTE MILES
LONGITUDE EAST OF GREENWICH

THE AUTHOR'S ROUTE TO THE MINYA KONKA, ON THE CHINA-TIBETAN BORDER

Never before had this magnificent group of snow peaks been photographed at close range. The journey was made by a National Geographic Society expedition over lofty passes and through dense forests, which yielded many botanical and zoölogical specimens. These have been brought back to America for study and classification. The map has been drawn from sketches and notes made by the author in the field; the latitude and longitude of specific points, as well as the heights of mountains and passes given in the text, are, therefore, only approximate.

It was at Kulu that the king asked me if we had in America any dragons in the zoo, and stared at me, open-mouthed and in wonder, when I informed him that there was no such animal. "But what makes the thunder?" he asked. "Is it not the wind blowing under the scales of the dragon, thus ruffling them and causing the thunder?"

When we left Kulu, lamas accompanied us to a point outside the monastery, where we said farewell to our hosts. The Muli king had provided for us an escort of ten armed Hsifan soldiers from his army and one lama of rank from the Kulu monastery to go with us to Minya Konka and Tatsienlu, then back to Kulu.

The lama was well mounted and armed. Besides his rifles he carried a reliquary shrine and a copper statue of Buddha, all fastened to his belt—the rifle to warn off Tibetans predatorily inclined, the religious articles to make bullets harmless.

### TRAIL LEADS OVER 15,000-FOOT PLAIN

Our trail led over the high Muli tableland at 14,500 to 15,000 feet elevation, over alpine meadows, through fir and rhododendron forests, through deep gorges and valleys, over high passes where elk were common and where the large white and black Tibetan eared pheasant (*Crossoptilon crossoptilon*) calmly walked in flocks up the valley slopes through underbrush.

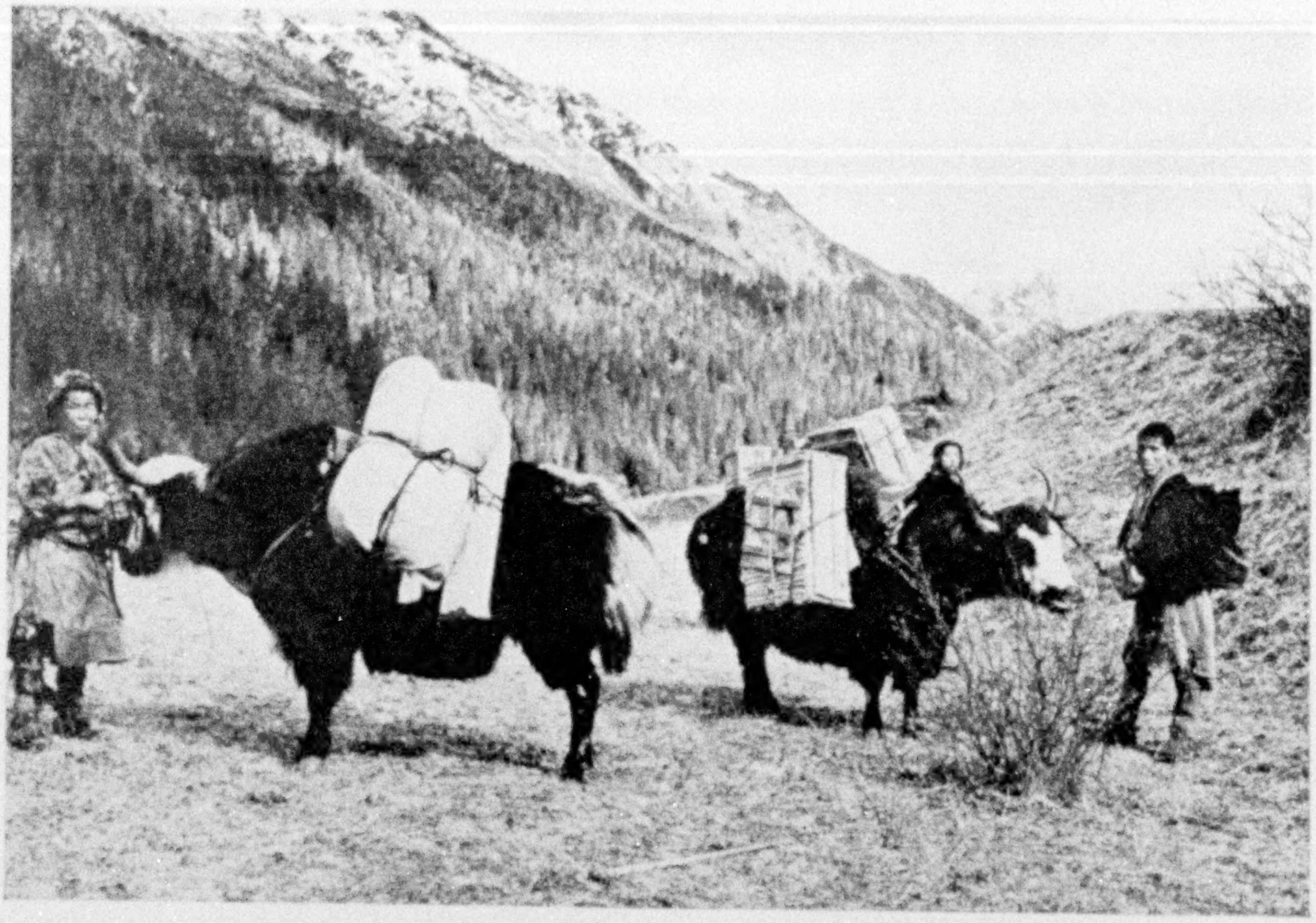
A FIR FOREST BELOW THE CHIPRIN PASS

The expedition negotiated this pass in a fierce blizzard on May 6, 1929, in order to reach Chengtsi (see page 411). The firs are heavily covered with snow.

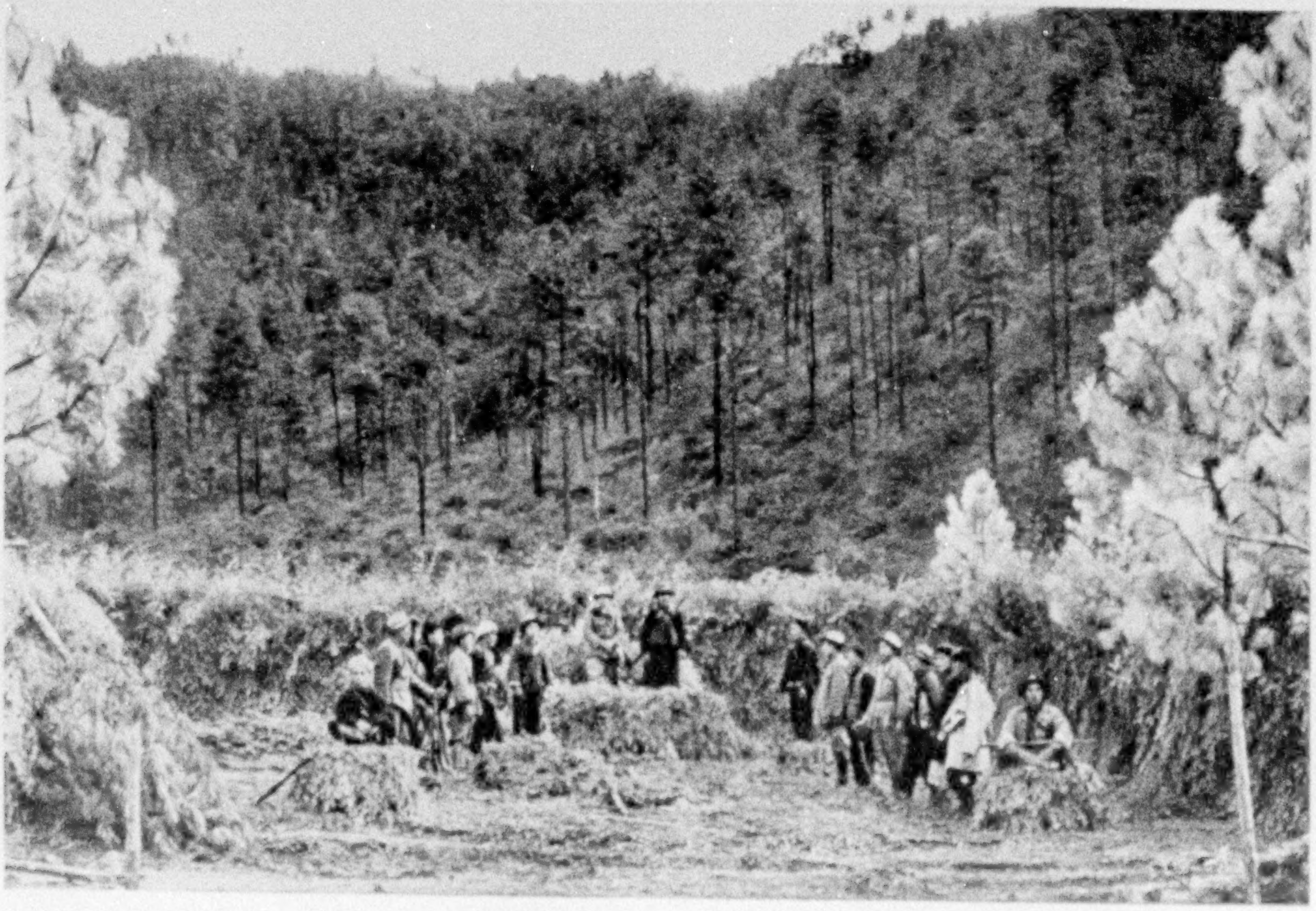
At one of our beautiful camping spots called Aloching we found a prepared place which had been used some weeks previously by the Muli king. An avenue of hewn pine trees stuck into the ground for the occasion led to a compound of fir trees and a throne of fir boughs. Here the Muli king had sat in state to give the peasants of the neighborhood an opportunity to prostrate themselves and receive his blessing, and here my men and I, plus our lama and soldiers, played Muli king (see illustration, page 390).

After arduous journeys lasting several days, we finally reached the Yalung River at Mutirong, called Rompo in Hsifan, still in the Muli king's domain. The boundary of the Muli kingdom extends only a day's journey north of Mutirong, on the east bank of the Yalung, to the Wadzanran Pass, 16,000 feet in height, but it stretches seven or eight days' journey south, or nearly to the junction of the Litang and the Yalung rivers.

From the tiny Hsifan hamlet of Reddo, built of stones, the trail descends in steep zigzags to the banks of the Yalung, dropping nearly 6,000 feet from the edge of the Yalung Gorge. Here the river flows at an altitude of 7,300 feet.

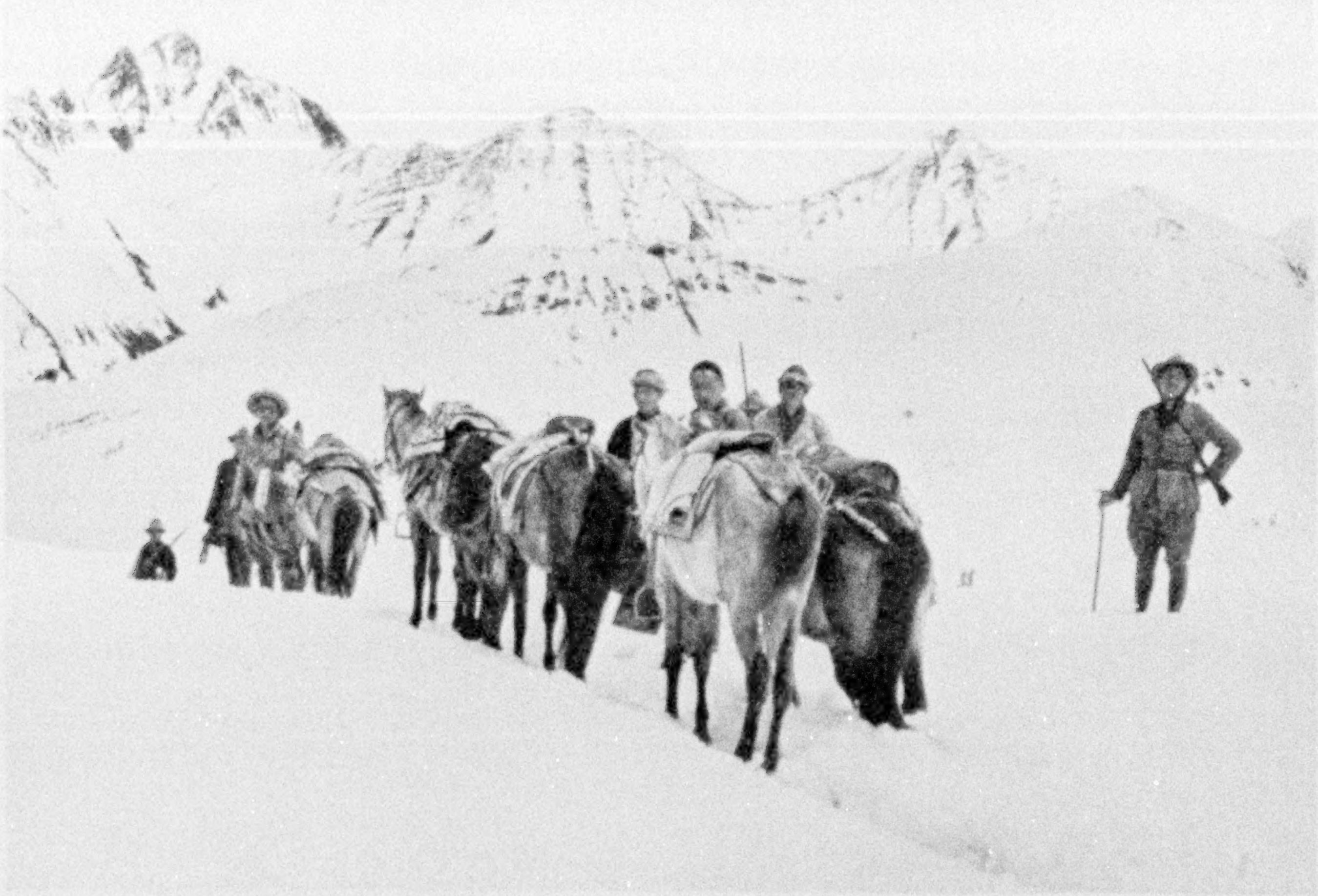


YAKS LOADED WITH THE EXPEDITION'S PLANT PRESSES



PLAYING MULI KING

When he travels from one monastery to another in his kingdom, the ruler orders his retinue to erect thrones of fir boughs, and elaborate compounds with avenues of pine trees leading to the thrones. Here he sits, surrounded by his lama officials, and receives homage from his peasants, who prostrate themselves and crawl into his presence. In this case the head boy of the expedition stands on the throne with the Kulu head lama (see text, page 389).



AT THE SUMMIT OF THE DJESI PASS—ELEVATION, 16,300 FEET

The pass, which is three days south of Tatsienlu, was deep in snow and the caravan had great difficulty in negotiating it (see, also, text, page 414).

Back of Mutirong the snow peak of Muti Konka rises to a height of 19,000 feet. No previous record appears anywhere of this peak with large glaciers on its western slope.

Mutirong is composed of two hamlets divided by a ravine, which descends from Muti Konka. It is situated on a terrace in the Yalung River valley, inhabited by Hsifan, or Chrame, subjects of the king (see Color Plate XI).

### WHOLE VILLAGE LABORS TO HELP EXPEDITION

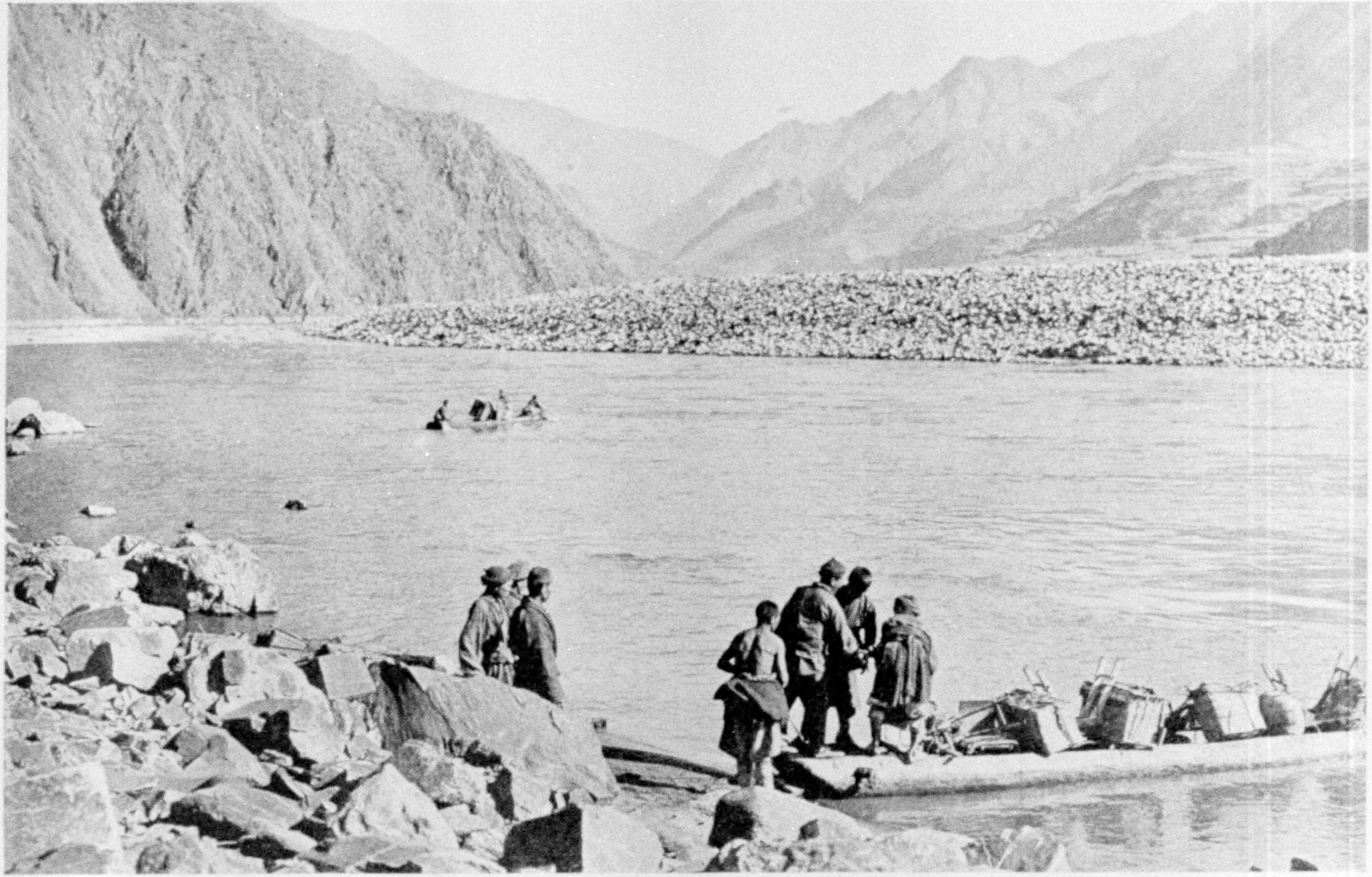
Here the village people worked a whole day, in shifts, to row our belongings across the Yalung in two canoes lashed together. Without the help of our lama guide, this would have been impossible; but for him, these people would not have moved a finger. He was much feared, and the peasants approached him as he in turn would have approached the Muli king—with bowed head, bent body, and folded hands.

During one day of rest in Mutirong, I occupied a tiny one-room stone house which served as a chapel for a lama. As it was used only by gods, I naturally thought it would be flealess; but I soon found my logic was erroneous.

In Mutirong we replenished our supplies and hired two guides who knew the trails to the scattered hamlet of Chiulung-hsien, several days' journey to the northeast. A day's journey over such difficult mountain trails, scaling passes from 7,300 to above 16,000 feet, is usually reckoned at from 20 to 22 miles; but, as this country is very sparsely inhabited, camping places, and consequently the day's stage, are determined by water supply and sufficient grazing ground for the animals. Hay or straw cannot be bought, especially in the winter or early spring.

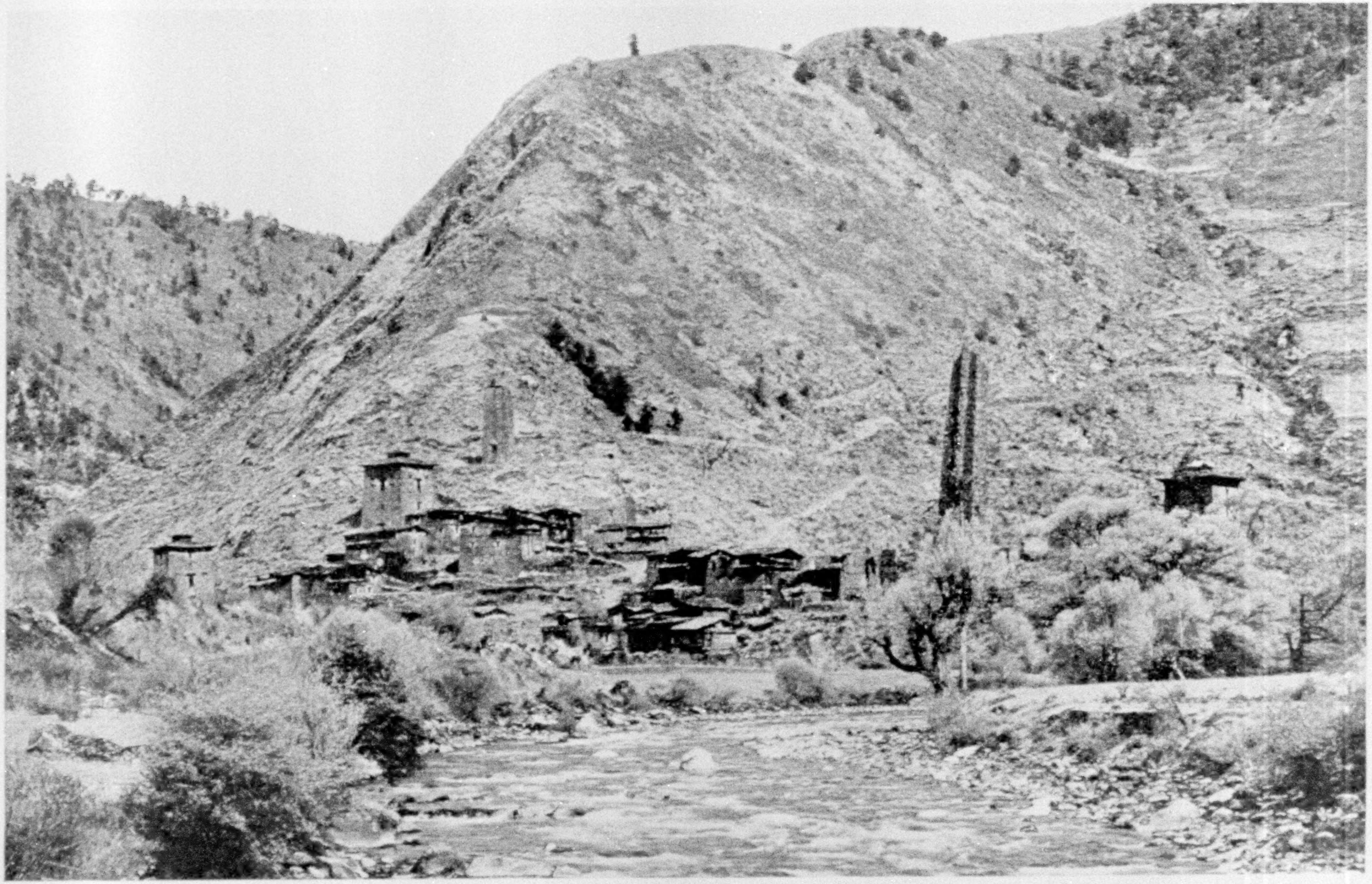
### WOMEN CARRY WATER UP 2,000-FOOT CLIFF FOR EXPEDITION'S CAMP

The trail from Mutirong leads up the Yalung River to a hamlet; thence to the Wadzanran Pass, the boundary between Muli and the former Chiala kingdom. For loaded mules the trail is not negotiable to the grassy terrace above the river, where camp has to be made. This terrace is the



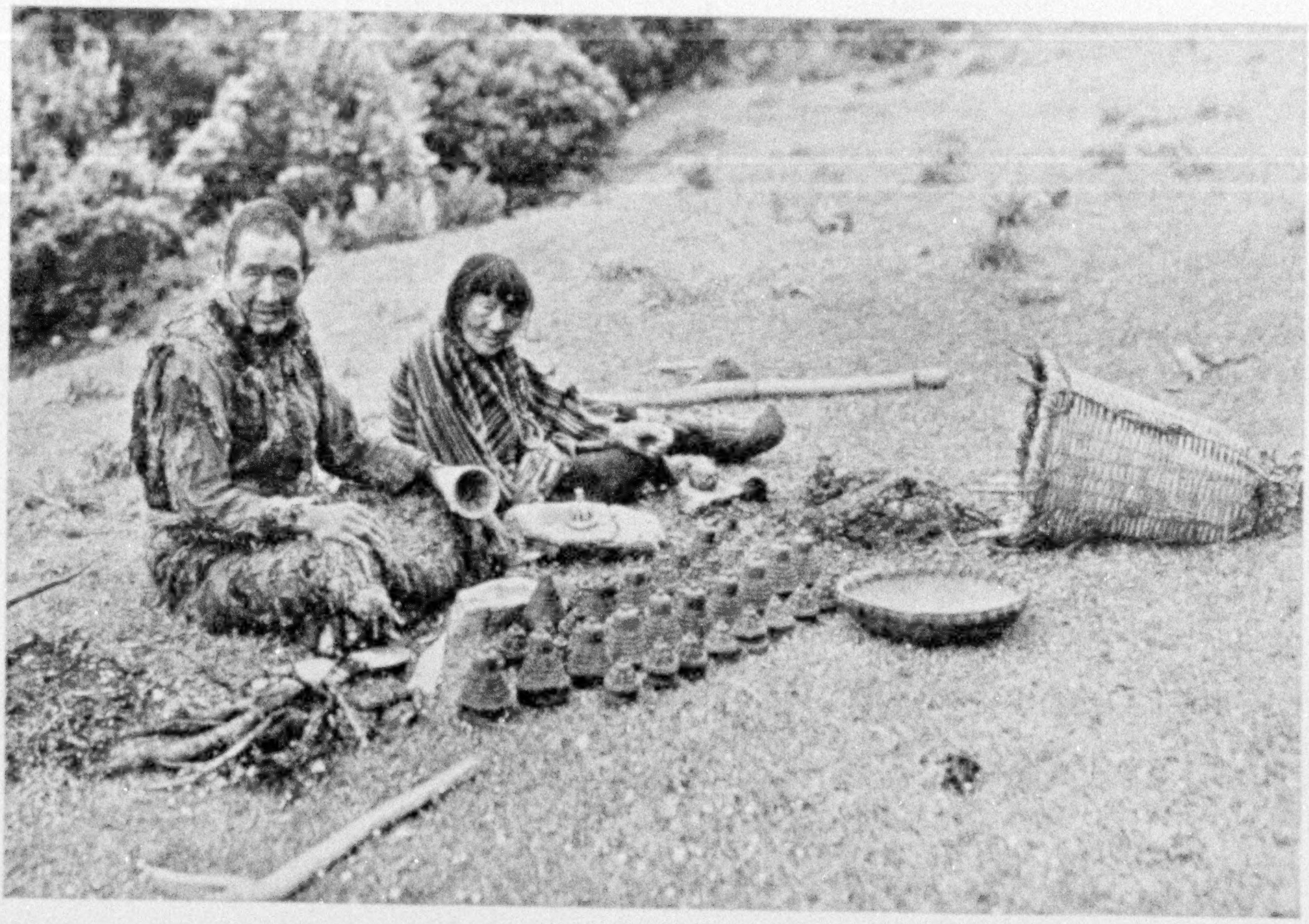
THE EXPEDITION IS FERRIED ACROSS THE YALUNG AT MUTIRONG

At low water the natives use dugouts to cross the river. At high water this is impossible, owing to the swift current, and a single rope bridge is then used. Two dugout canoes are tied together to make them steady. While the supplies were ferried across in the canoes, the mules and horses had to swim.



THE VILLAGE OF TAPUTZU (BIG SHOP) AT CHIULUNGHSIEN

Originally this was a Tibetan hamlet under the Chiala kings. Now it is occupied mostly by Chinese (see text, page 402). The tall structures are watchtowers (see, also, page 395). The square towers are Tibetan temples.



MINYA TIBETAN BEGGARS OCCUPY THEIR TIME MAKING CLAY SHRINES

The woman kneads the clay into oblong balls and hands it to the man, who presses the damp lump into the brass mold, at the same time inserting into the base a few grains of barley as an offering. Note the small dish of barley by his side. The chortens are dried in the sun and then piled up in a shed outside Snow Monastery (see page 412). It is considered a very meritorious act to make innumerable quantities of such chortens as offerings to the gods.

only place level enough to pitch a tent, and even to this camp water had to be carried up from the village. Our lama had given orders at Mutirong and to other Hsifan villages to have everything prepared, and all day long women had climbed the 2,000-foot cliff, carrying water in wooden buckets.

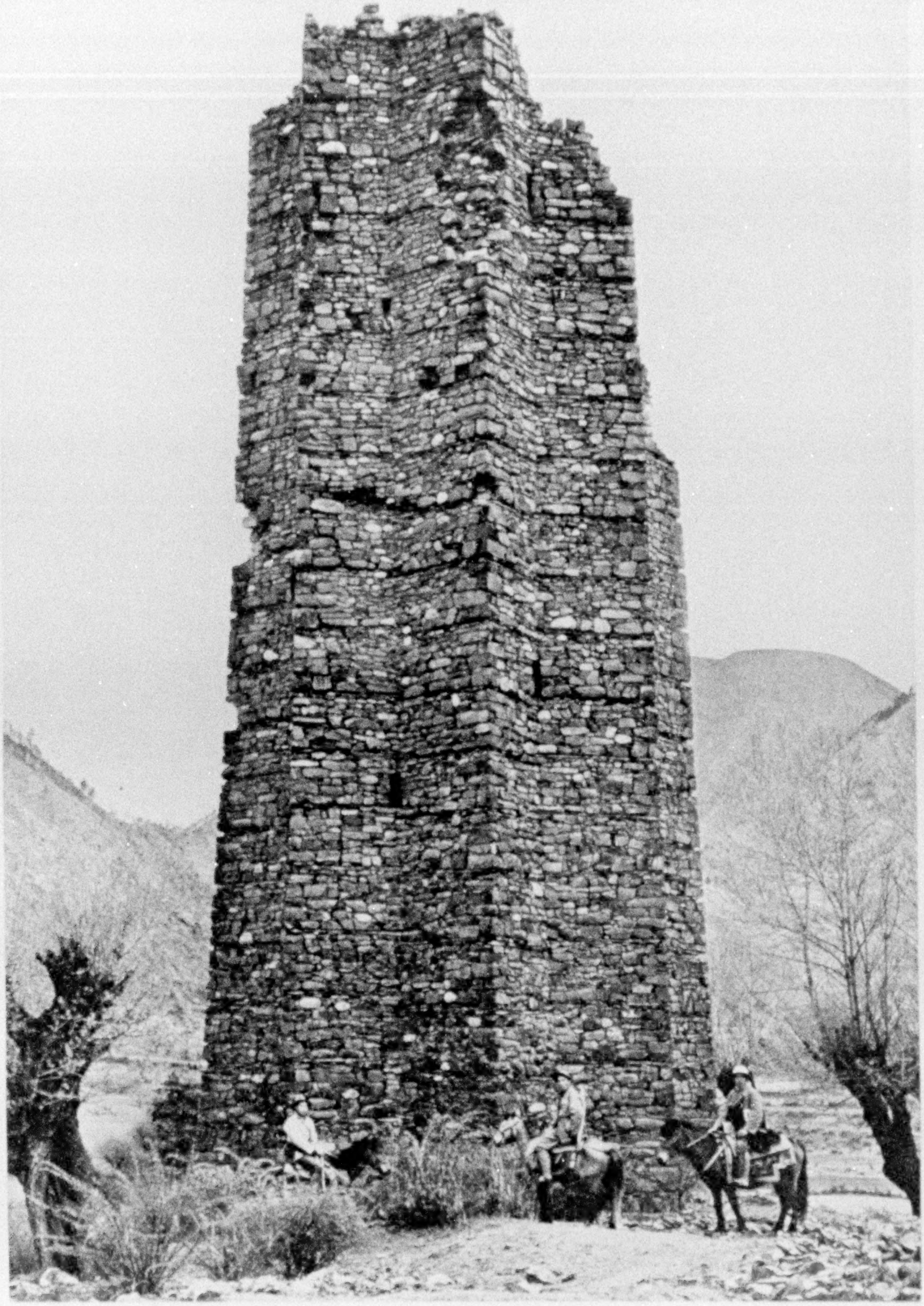
Because the mules could not climb up loaded, many Hsifan peasants were engaged to carry our camping supplies up on their backs. Each man carried a trunk, or box, or tent, not only to our first camping place, but for two days longer, up the Wadzanran Pass and down to another camp at Mundon, the first village in Chiala territory, overlooking the gorges of the Yalung.

## FIVE GRUELING DAYS TO ADVANCE A FEW MILES

Merely walking or climbing over a steep trail at heights of 16,000 feet is difficult enough, without carrying 80 to 100 pounds on one's back. This feat was performed by the Hsifan peasants through fear of our lama, who represented the Muli king.

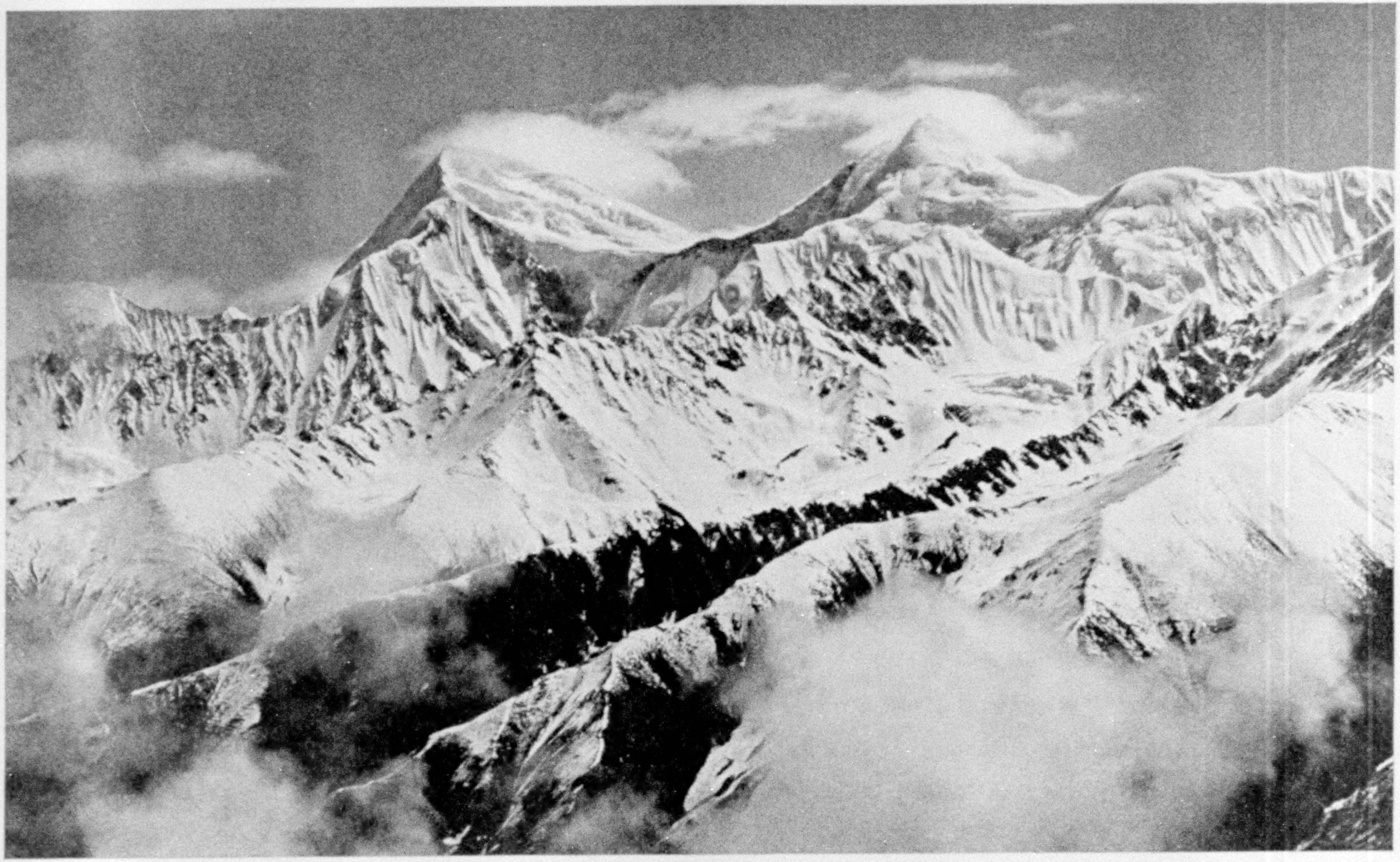
From Wadzanran Pass we had a wonderful view over the Yalung gorges, the river roaring 9,000 feet below us, while to the south loomed the rounded domes of Muti Konka. Far to the west rose the three sacred peaks of Konkaling. I marveled at the toughness of the bandits from Konkaling who brave this journey! For 280 miles, through canyons, across rivers, and over rope bridges, a two or three weeks' dangerous journey, they come in the pursuit of their business, robbery.

The scenery hereabouts is overwhelmingly grand. Probably its like cannot be found elsewhere in the world. Where Muti Konka rears its eternally snowcapped crown 19,000 feet into the sky, the Yalung flows 12,000 feet below. From the Wadzanran Pass I looked back to Reddo, only a few miles as the crow flies, yet the drop and climb had required five terrible days! Airplanes? No place to land; no gasoline; not even kerosene. The natives still



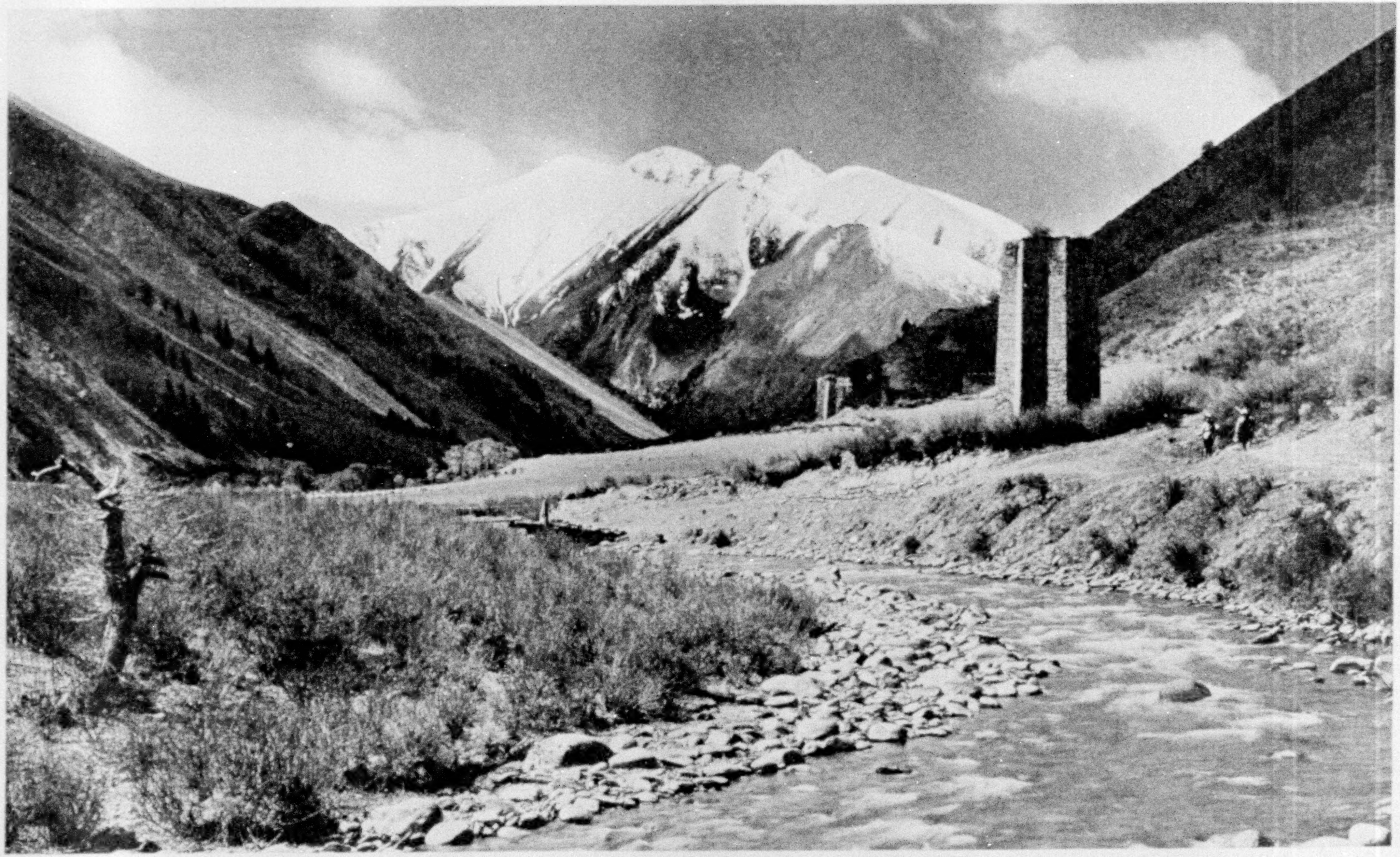
A WATCHTOWER ERECTED BY THE OLD CHIALA KINGS

These *tiau lu*, usually to be found at valley junctions, are now in a dilapidated condition and useless. This particular one guards the approach to the old Chiala kings' palace near Chiulunghsien and is several hundred years old.



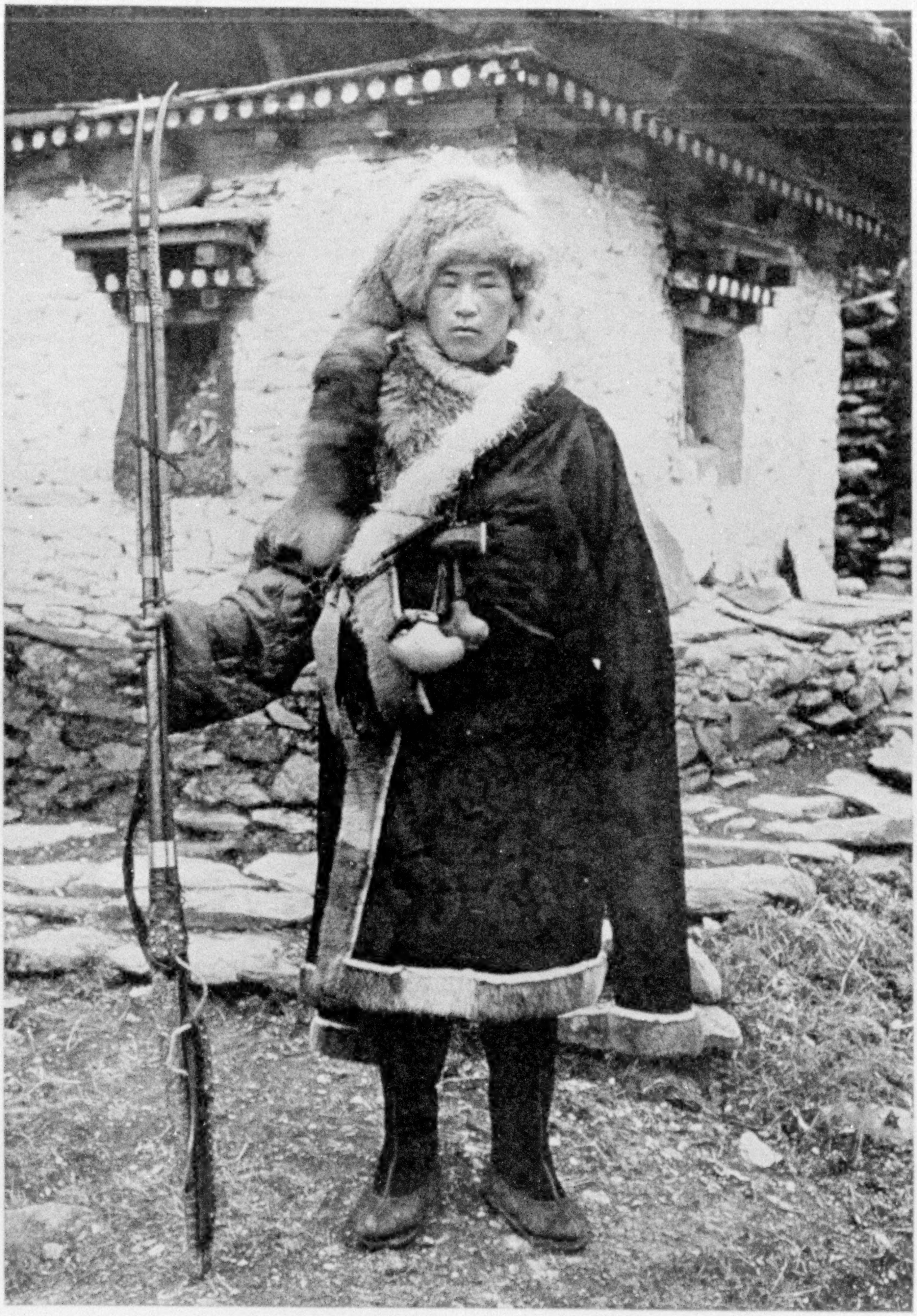
PEAKS TO THE NORTH OF THE MAIN PEAK, MINYA KONKA

The valley in the foreground at the foot of the Minya Konka Range is the Buchü (see, also, illustration, page 416).



SNOW PEAKS FORM A BACKGROUND FOR THE LOWER CHENGTSI VALLEY

To the right is an old *tiau lu*, or defense tower (see pages 393 and 395). The Chengtsi and Mudju rivers unite some distance below to form the Luli, which flows into the Yalung.



ONE OF THE EXPEDITION'S NASHI ASSISTANTS IN TIBETAN ROBES, WITH MATCHLOCK GUN

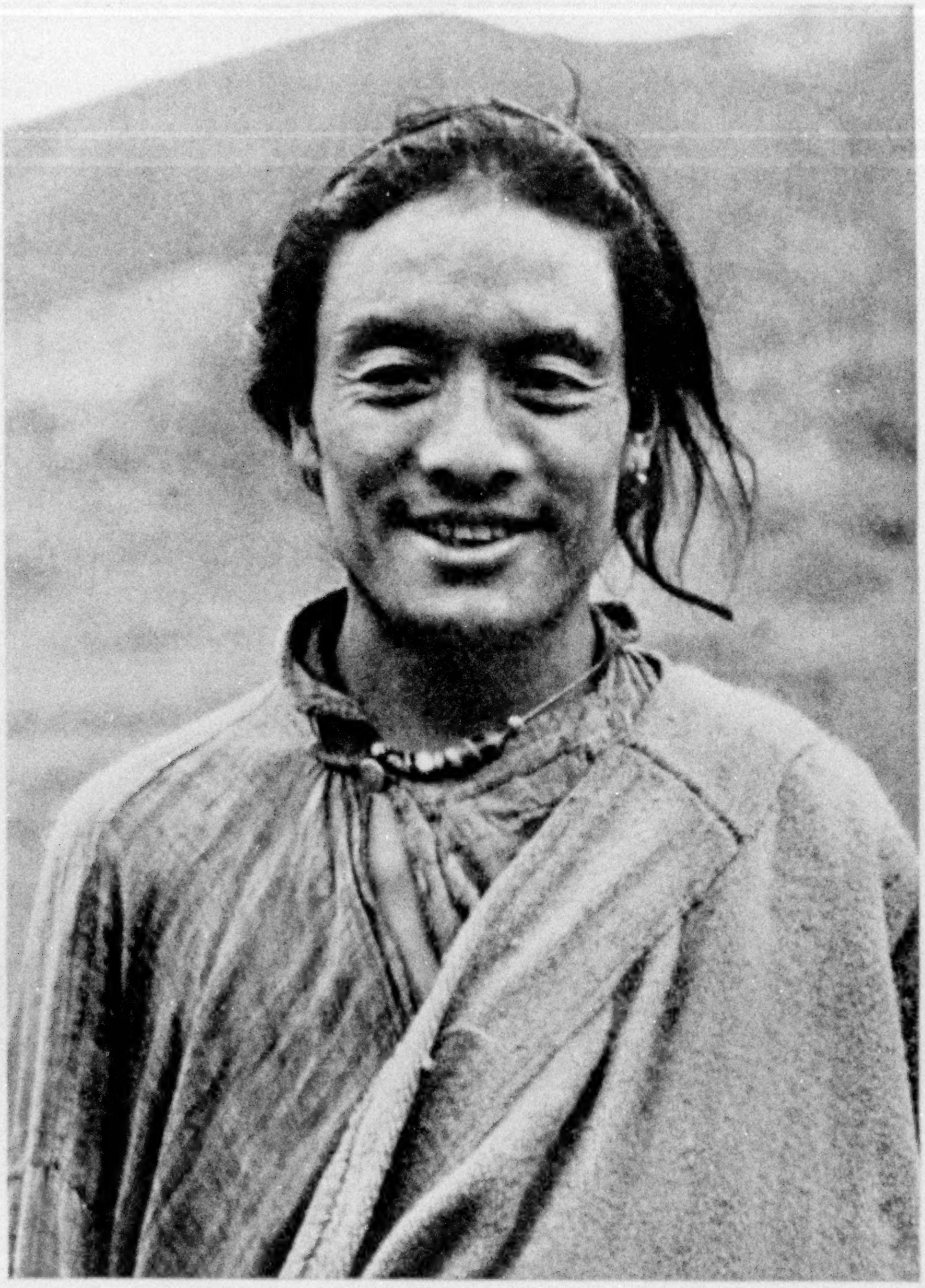
He wears a powderhorn and a belt over his shoulders, a foxskin as headgear, and a fleece-lined garment faced with satin. This is one of two Nashi men whom the author brought to Washington after a previous expedition. While in America the young man studied photography, and his companion learned taxidermy to aid them in their future work for The Society.

use pine-chip torches or butter lamps as their only light, and the latter are usually reserved for the gods.

A scenic wonder of the world, this region is 45 days from the nearest railhead. For centuries it may remain a closed land, save to such privileged few as care to crawl like ants through its canyons of tropical heat and up its glaciers and passes in blinding snowstorms, carrying their food with them. And the cost of traveling in this part of the world is prohibitive for an ordinary mortal.

### NO OUTLOOK IN ANY DIRECTION

From Mundon, a dreary Hsifan hamlet where water had to be carried by the women from a thousand feet below, the zigzag trail leads over sharp spurs to another stream and gorge, and then for two days up a valley called the Yangwe Kong. Here we found Hsifan as well as Chinese settlements, the first Chinese encountered since leaving Yünnan Province.



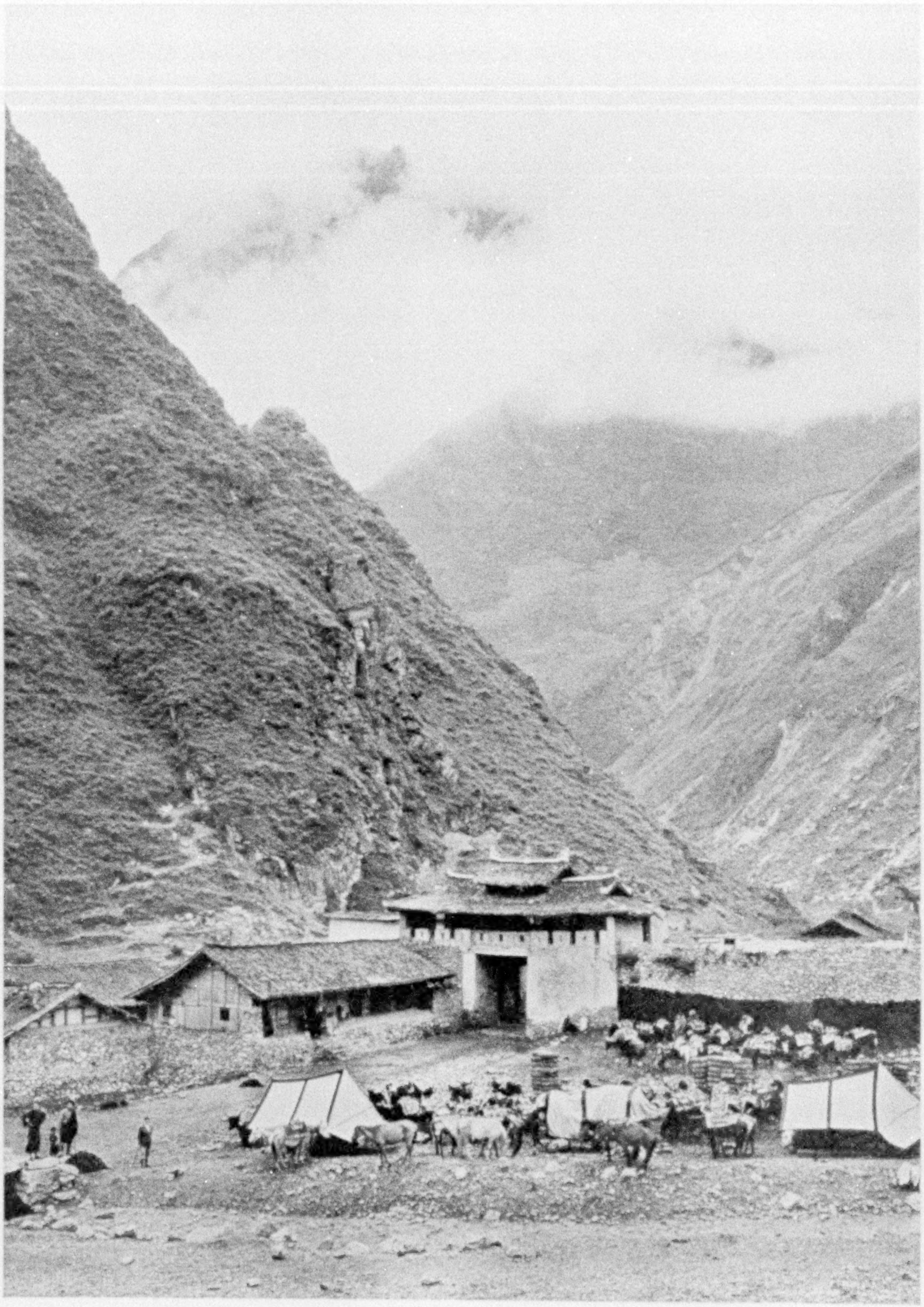
GENIAL DROMBO, HEADMAN OF THE YULONGHSI DISTRICT

This Minya Tibetan has charge of the former Chiala king's palace, which is now public property. He acted as an unwilling guide to the Minya Konka glaciers (see, also, text, page 413).

Heavy rains continued for two days and made traveling most disagreeable. The clouds rose like steam from the valley floors and hung like cotton streamers to the crenelated mountain spurs. No outlook in any direction! Here people live and die without the slightest knowledge of the outside world. How oppressive to be buried alive in these vast canyon systems! Or are they happier for it? Whenever we came to a village the peasants would gather about us and with folded hands would beseech me to dispense medicines to sick relatives. Often I could help. Sometimes I had to refuse.

For two days we followed the Yangwe Valley to the foot of the Druduron Pass. Our animals were weary and were suffering from lack of grass or hay. Only a limited beans ration could be given them twice a day. It was then I decided that on the return journey we would buy all the beans necessary and have them carried by yaks, which can subsist on grass alone.

At the end of the second day, at the foot of the pass which we had intended to cross the following morning, I found



THE NORTH GATE OF TATSIENLU, WITH A TEA CARAVAN ENCAMPED OUTSIDE

Prior to the author's survey, only meager reference had been made to the great mountain range lying three days' journey to the south of Tatsienlu (see text, page 385).

READY TO LEAVE TATSIENLU FOR THE MINYA KONKA RANGE

The Society's expedition made the China Inland Mission its headquarters during its stay in Tatsienlu. The animals of the party are being assembled and the loads are about to be packed onto saddle racks.

my caravan strung out for miles. Some of the mules were unable to walk, even without a load. The sturdier animals had to be led back for three or four miles to pick up abandoned loads. Only a few reached camp that night, and these had to be aided by the hardy muleteers, who themselves shouldered some of the saddle frames and wearily carried them to the head of the valley.

Thus only the most necessary camping outfit, such as tents, bedding, food, and cooking utensils, reached the foot of the pass. Some of my men stayed behind with the lingering mules.

### DRUDURON PASS IS REACHED IN BLIZZARD

As bad luck would have it, we had hardly arrived at our camping place when snow began to fall. A blizzard raged all night. An immediate crossing of Druduron Pass was now impossible. We had already been informed at Deon Gomba, a tiny monastery recently looted by the Konkaling bandits, that the Druduron, although not high, was snowed in and hence impassable. This additional blizzard did not improve matters, and with an exhausted caravan it seemed hopeless.

The following morning, when I looked out of my tent and beheld our camp almost buried and our animals shivering in the cold, I really feared for the shelterless men who had stayed behind with the exhausted mules. I also feared for two of our soldiers who had braved the pass the evening before. They were to go to Chiulunghsien to bring us yaks, which could plow a trail through the deep snow and help us across. The snowstorm continued for a short time; then the sun appeared. This was the last day of April, 1929.

Druduron Pass, with an elevation of 14,800 feet, is the lowest on the entire journey to the Minya Konka Range. And, in spite of the deep snow, we finally managed to cross it into the valley of the Brüdu. The Druduron forms an ethnic divide, for it separates the Hsifan, or Chrame, tribe, who live to the south of it, from the Tibetans to the north (see Color Plate VI).

At Chiulunghsien, where there is a Chinese magistrate, we camped for several days on a nameless stream, which I called the Cheulung, or Nine Dragon, River. There I gave our men and mules a rest while we developed films and color plates and arranged our collection.

### A VILLAGE OF LEANING TOWERS

The magistrate, who lives in what used to be the residence of the former Chiala king, a filthy, dilapidated stone house, was a friendly, well informed man, who could endure his post only by sleeping from one inebrious state to the next carousal.

Opposite the magistrate's house was the queerest hamlet I ever saw, called Taputzu, or Big Shop. It is a conglomeration of tall leaning towers and square stone buildings shaken by many an earthquake, and yet the people live unconcernedly with huge rock towers overhanging their very houses. One gentle shake and they would be buried in an avalanche of rock! Anywhere else in the world steps would be taken to demolish these dangerous ruins, but the population of Taputzu lives in utter indifference and calmly awaits the next tragedy.

At every approach to this village there stands an octagonal watchtower dating back several centuries. Either the old Chiala king was not very secure in his position or else he and his subjects were harassed by outside bandits, such as the Hsiangchengwa. It was also suggested that these towers had been erected by the old Nashi king, Mutienwang, who once conquered this territory. This I doubt, for the towers here are of an entirely different architecture from those built by the Nashi king in Muli and elsewhere to the south and west.

### AN EXISTENCE OVERSHADOWED BY FEAR

The people of this region live in fear and trembling of the Konkaling and Hsiangcheng bandits, and the name Drashetsongpen, chief of the former, fills the hearts of men here with terror. The Minya Tibetans are indeed a gentle race. They are the very opposite from their cousins, the Drokwa, nomads of the northern grass lands, who, with the exception of the Ngoloks, are the most uncouth, fearless, and impudent of all Tibetans.

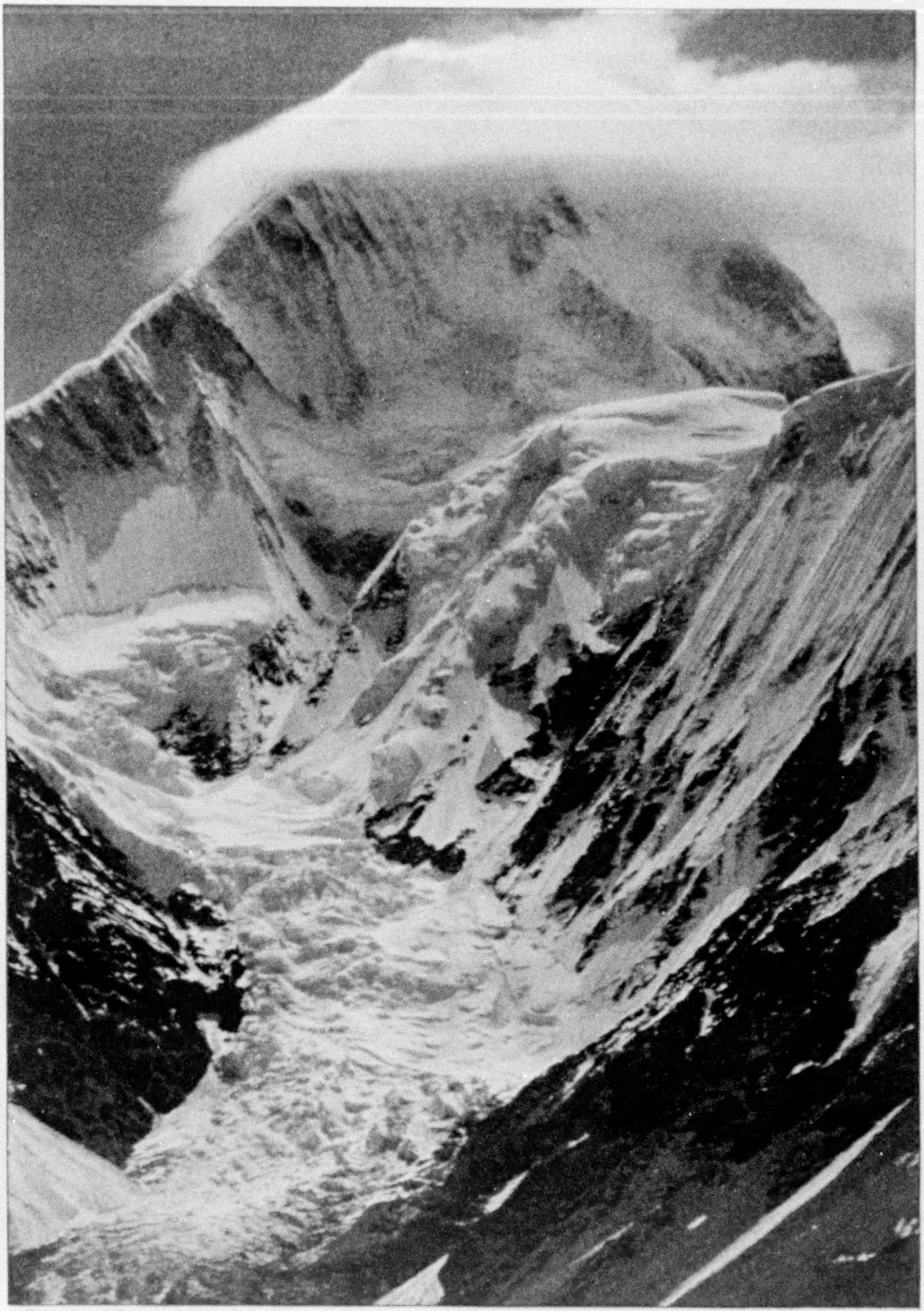
At Mutirong we hired fifteen yaks to give our exhausted mules a rest. But they were unruly and often dumped our loads; so we were forced to let them carry unbreakables, such as the driers for our plant specimens, bedding, tents, and beans for our animals. One yak was especially wild and hooked one of my muleteers in the groin, but fortunately not deep, and I managed to fix him up, sterilize, sew, and bandage his rather long flesh wound.

Our trail now led through wonderful forests of spruce, fir, and rhododendron, and past yak herders' camps, where we could secure fresh yak butter, much to the delight of our entourage. A delightful march through virgin forests and over lovely alpine meadows brought us to a camping spot some ten miles below Chiprin Pass, one of the highest on our journey. We pitched our tents among some willows along a stream, with snow peaks glistening in the evening sun and hemming in the valley on all sides. That night it snowed gently, but with dawn a blizzard started in earnest, and our Tibetans told us that unless we moved quickly and made for the pass it would be impossible for us to cross for several days.

I shall never forget the breaking of camp that morning. In a driving blizzard we packed our tents and bedding with numb hands. As we left our camping place the blizzard increased in fury, and I almost repented having started in such weather; but there was no use looking backward. In many respects it was beautiful, riding through the silent, somber forest, a fairyland palace of snow and ice.

Some miles ahead we found a lone Tibetan with some yaks. He was leaning against a wall of brick tea, by a much-dampened fire and a copper teakettle. He had fortunately crossed the pass the day before and told us that it was then still negotiable, although deep in snow. What it would be after a few hours more snowfall none could say.

On we went, over a pathless landscape, over fallen logs, in a driving blizzard, unable to see even a few feet ahead. It was like going into a wall of impenetrable white, ground and sky being one. The Muli king's soldiers, with their high Tibetan boots, pushed the snow ahead and made a trail over the trackless waste. Had the weather not been so severe, we might have followed the slow yaks, which plowed



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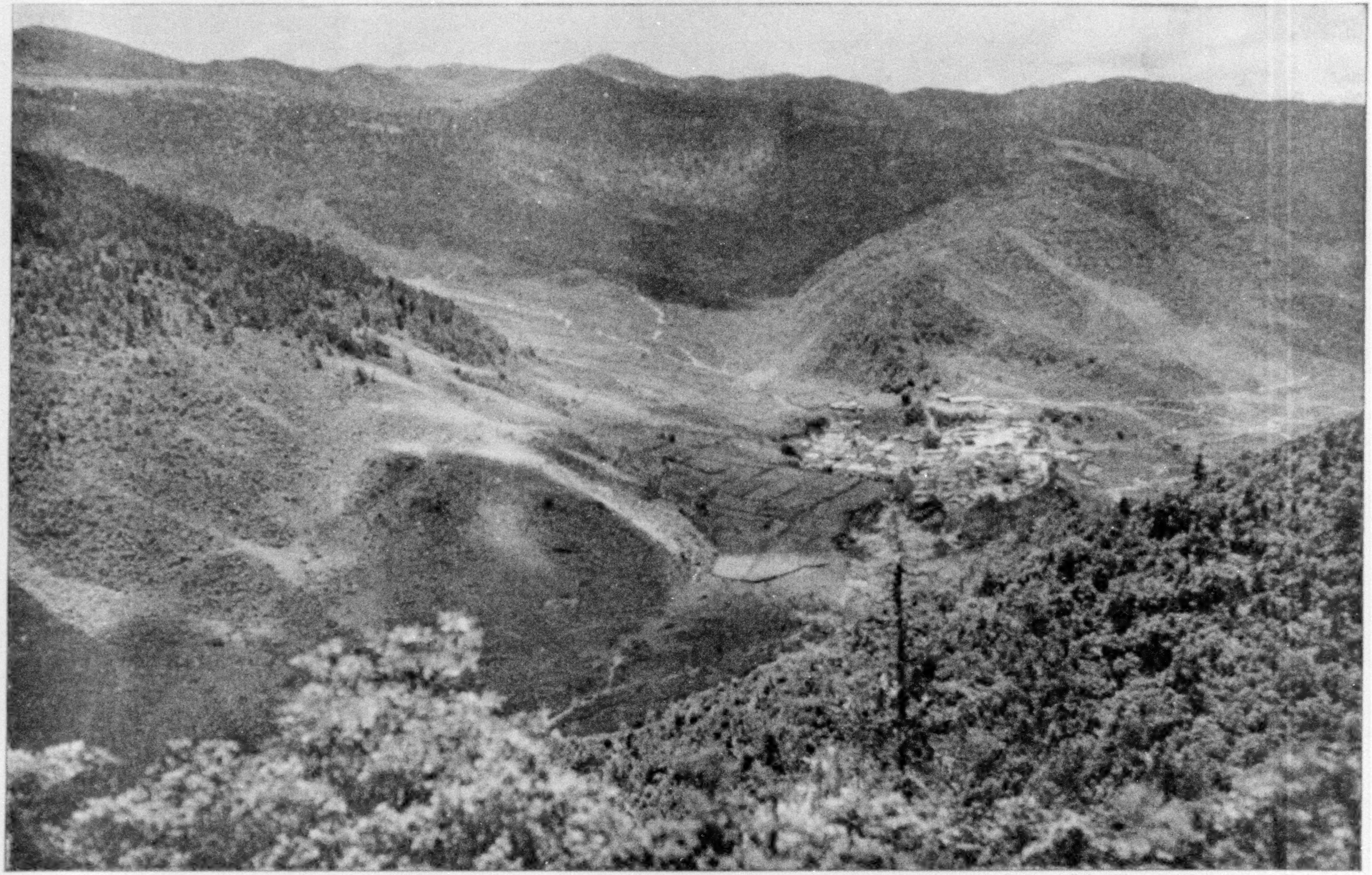
Natural-Color Photograph by Joseph F. Rock

MINYA KONKA, SNOW-MANTLED MONARCH OF ITS RANGE

A National Geographic Society expedition, under the leadership of Dr. Joseph F. Rock, first photographed at close range and mapped the mountain chain in Szechwan Province, China, to which this magnificent 25,600-foot peak lends its name.



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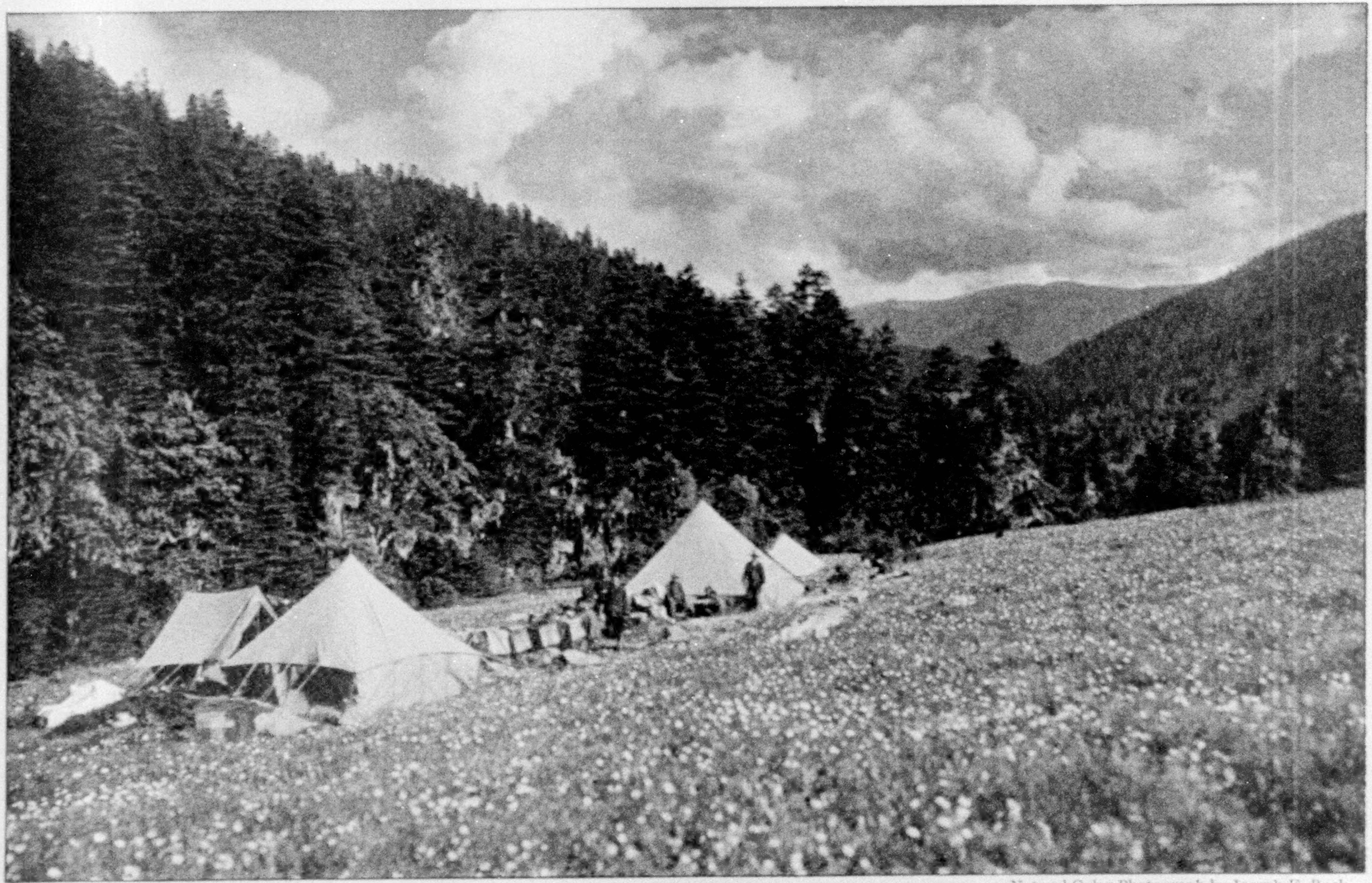
KULU MONASTERY THRIVES IN ITS MOUNTAIN FASTNESS

It was from this large and important lamasery in Muli that The Society's expedition set out for Minya Konka. The party carried supplies for a seven months' stay and was accompanied by an escort of the Muli king's soldiers under guidance of a Chinese-speaking lama.



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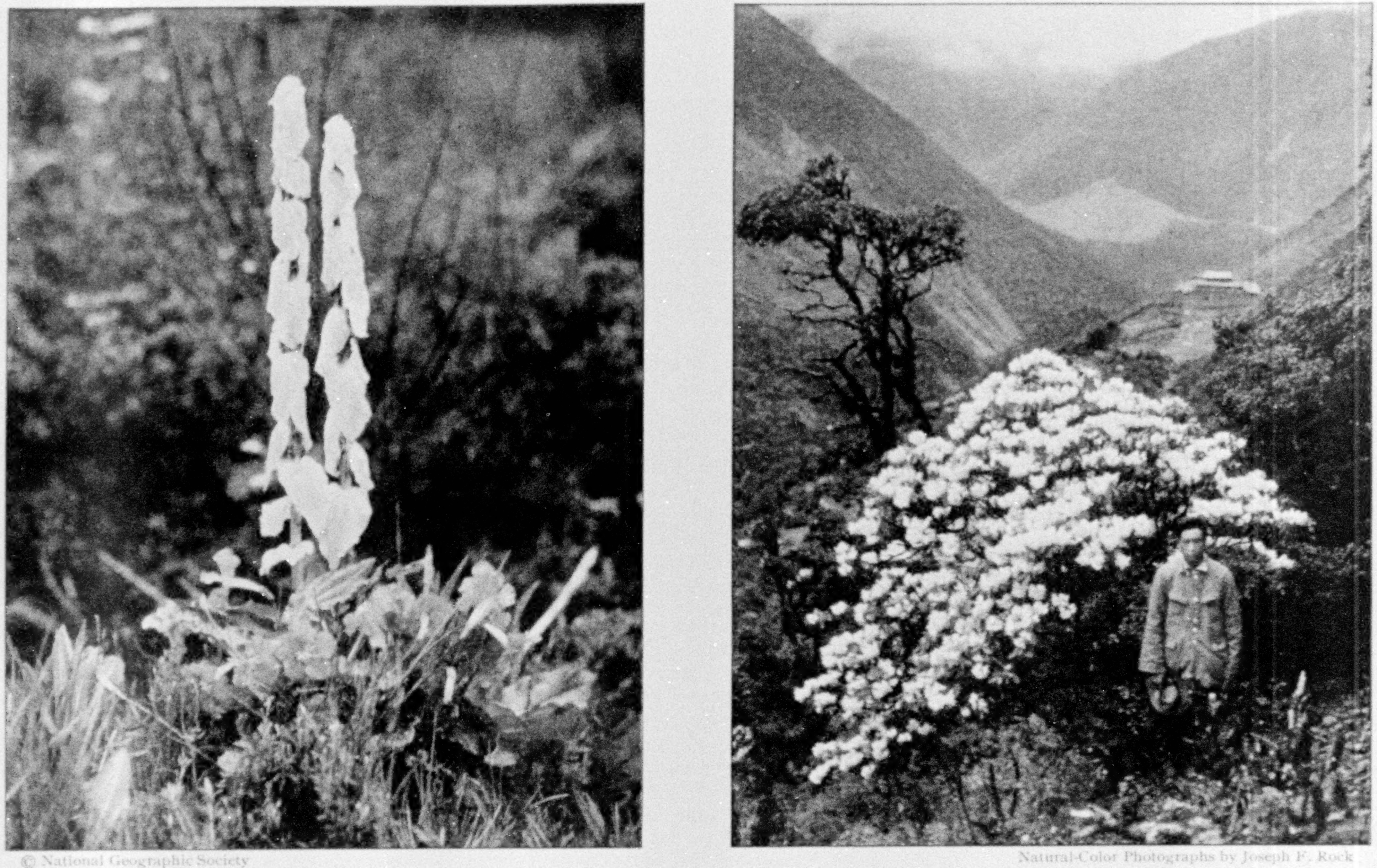
THE HIGHLANDS OF MULI PROVIDED EXCELLENT CAMP SITES

Here, at an elevation of 13,700 feet, the exploring party camped in an alpine meadow carpeted with primulas, anemones and caltha. Clear, bracing air and stately forests of firs and oaks rich in rhododendron undergrowth contributed to make the spot ideal for camping.



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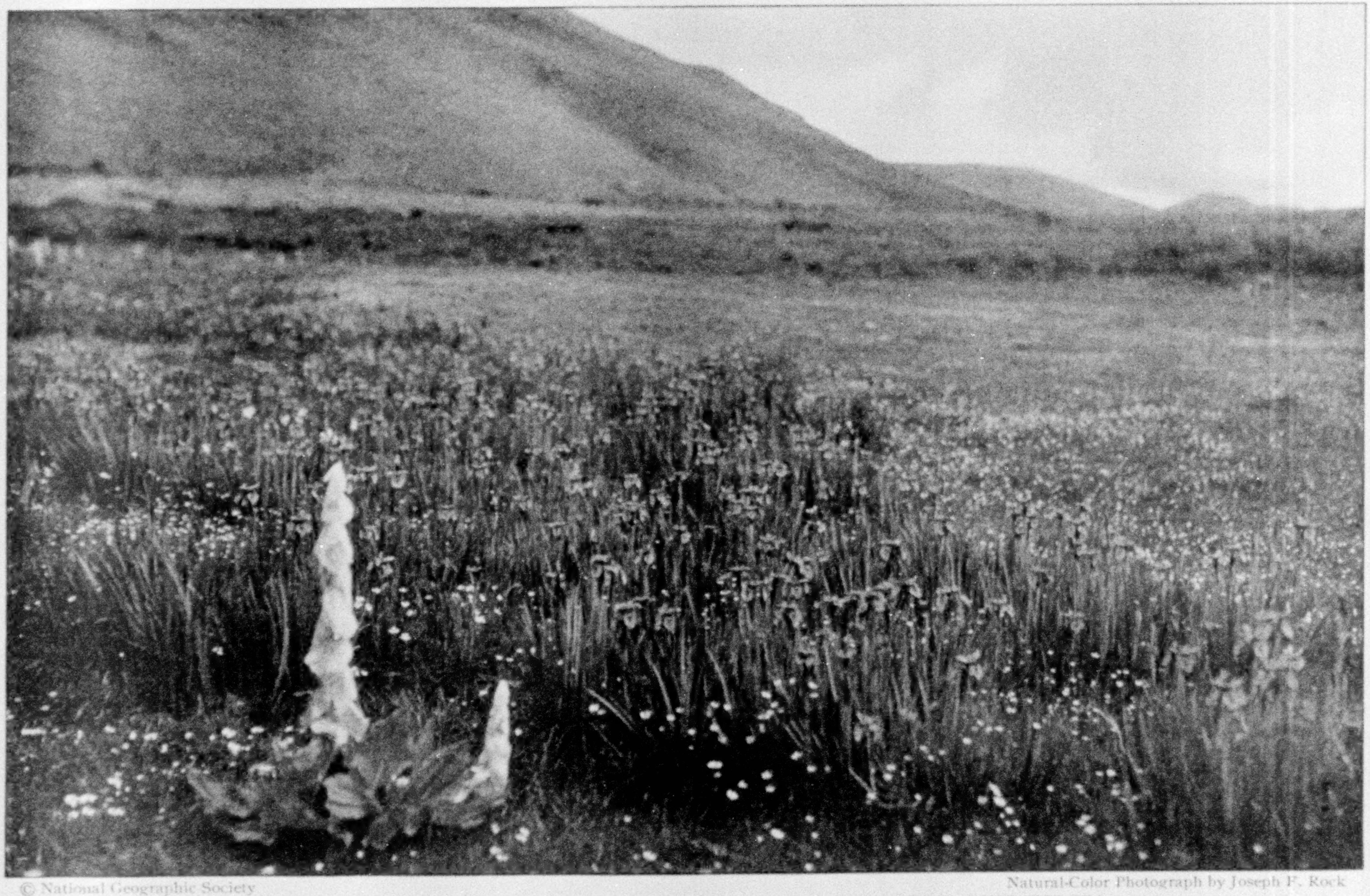
FLOWERS LEND COLOR TO MULI'S LOFTY VALLEYS

At the left a wild rhubarb plant rises through a circlet of lovely bignoniaceous trumpet flowers. The rhododendron tree in full bloom is one of thousands which filled the Konka Valley as the expedition passed through. Dr. Rock discovered many new species of rhododendron.



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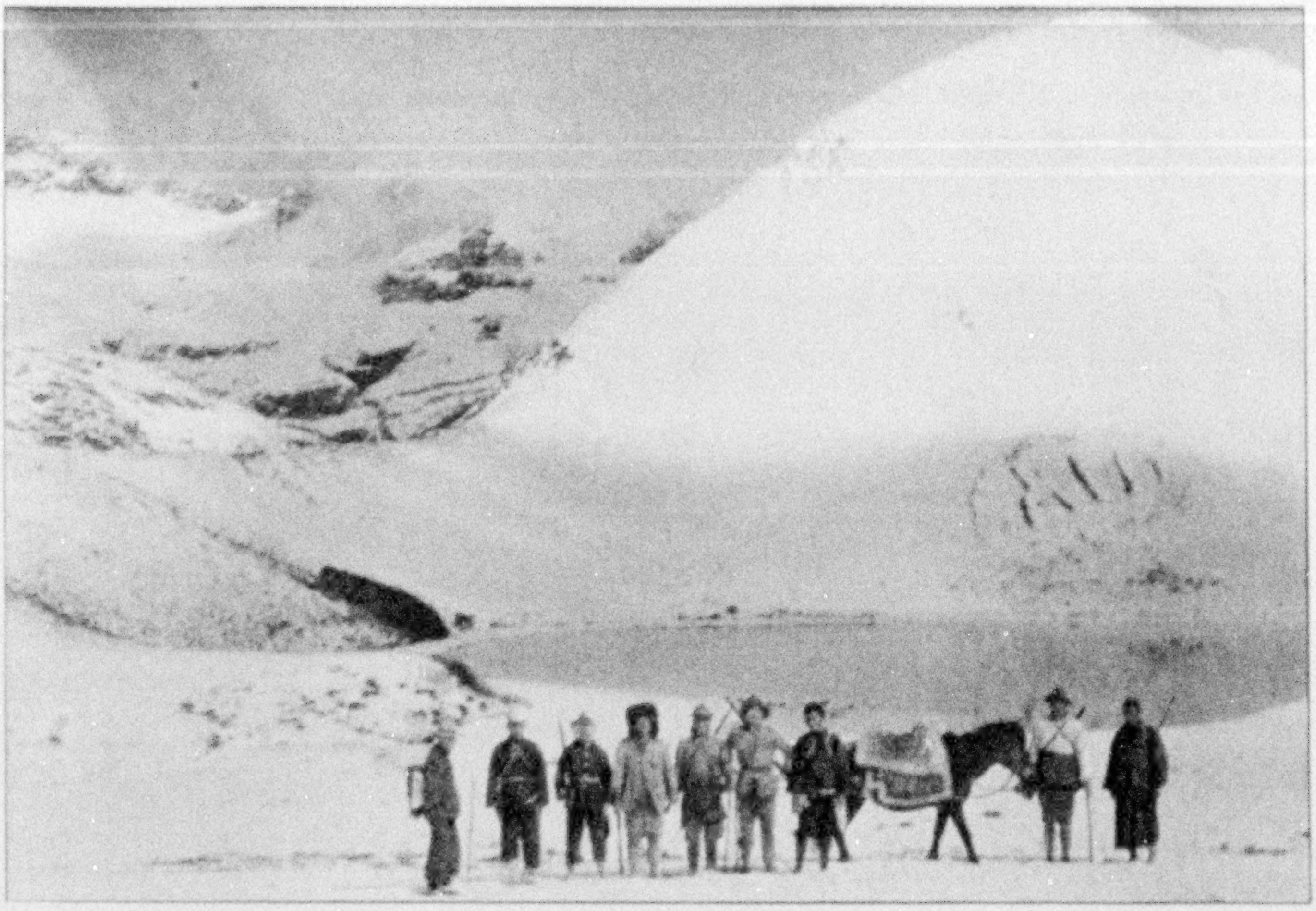
Natural-Color Photograph by Joseph F. Rock

BLUE IRIS BLOOM PROFUSELY IN A SWAMPY VALLEY NEARLY 15,000 FEET ABOVE THE SEA

Parts of the highlands of western China and northeastern Tibet were practically virgin territory for the botanist when Dr. Rock visited them. He collected extensively and made valuable contributions to knowledge of the flora of that remote region. The yellow flowers are a species of caltha, while the creamy stalk in the left foreground is a wild rhubarb (see also Color Plates III and IV).



DEEP SNOW MADE TRAVELING DIFFICULT THROUGH THE DRUDURON PASS

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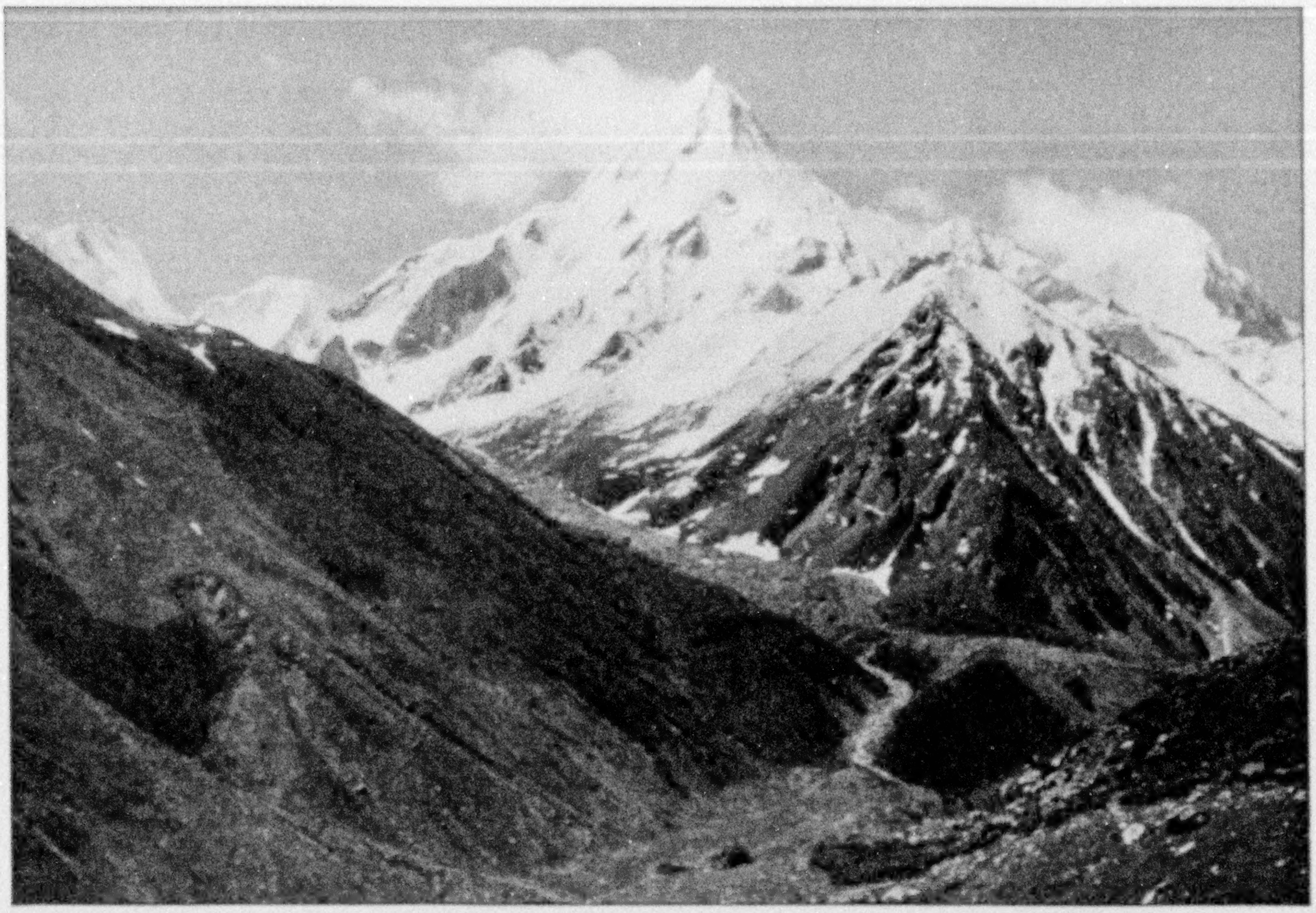
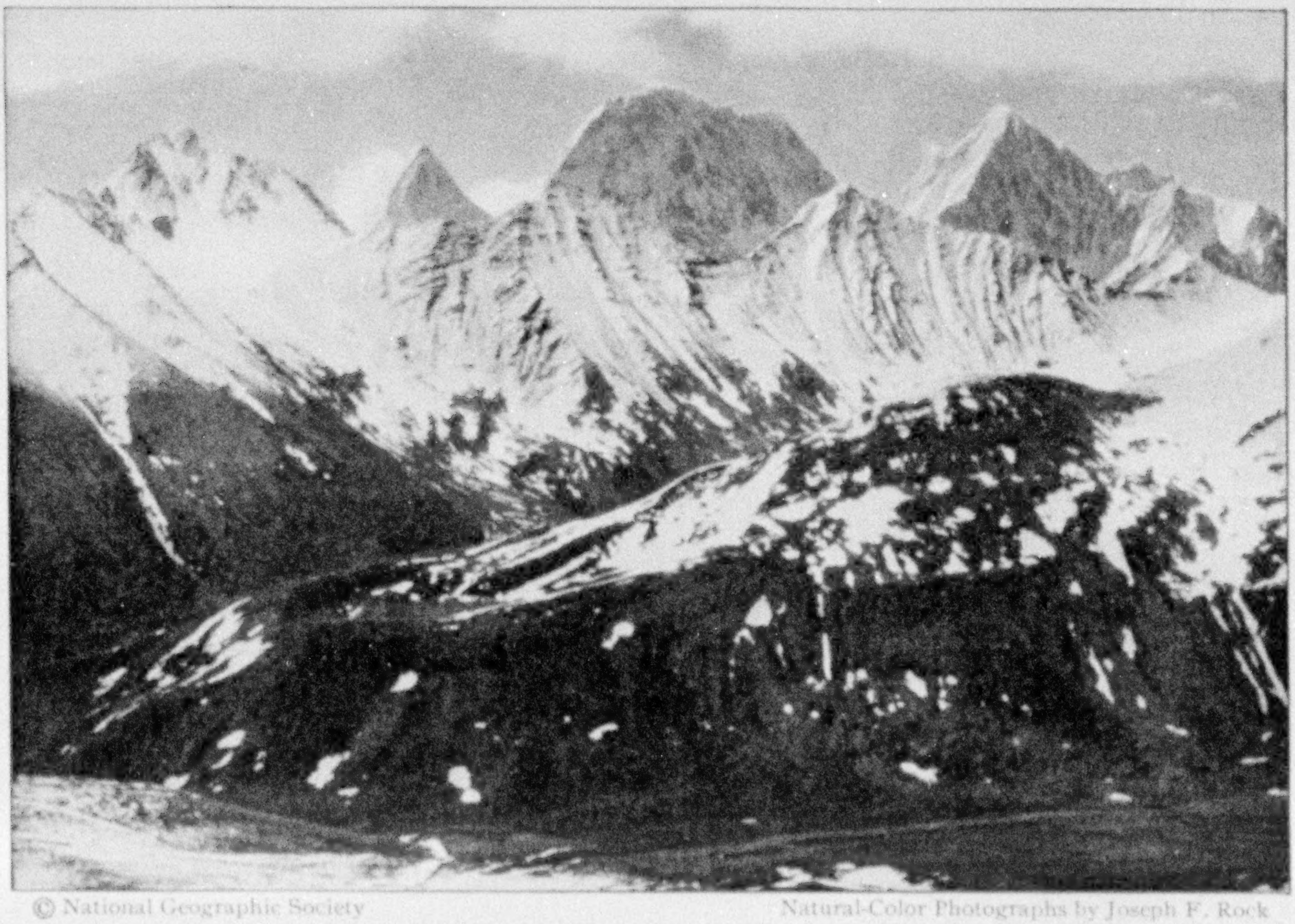
Natural-Color Photographs by Joseph F. Rock

PERFORMING THE LAST RITES FOR A DEPARTED TIBETAN

While the lama chants, the attendant relative feeds the fire with dry wood, green willow twigs, wheat, barley, and yak butter. Only Tibetans of standing are cremated; lesser folk are cut up and left as prey to vultures and dogs.



19,000-FOOT CHIBURONGI, ONE OF THE GIANTS OF THE MINYA KONKA RANGE



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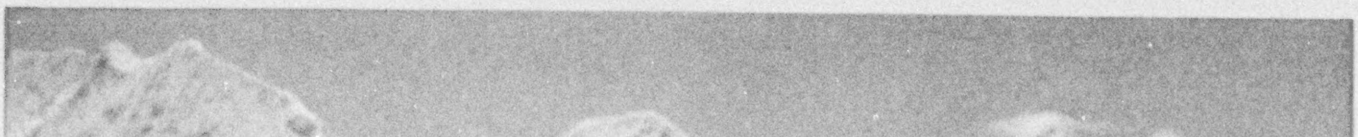
CRENELATED PEAKS NEAR THE ROOF OF THE WORLD

The ridge in the foreground forms a divide between the Riuchi and Djesi valleys. These imposing summits, from left to right, are Chiburongi Konka, Riuchi Konka and Mount Grosvenor (see also Color Plate X).

WHEN CLOUDS ENVELOP MINYA KONKA'S LOFTY SUMMIT



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Natural-Color Photographs by Joseph F. Rock

FEW WHITE MEN HAVE SEEN THIS MOUNTAIN MAJESTY

Members of The Society's China-Tibet expedition endured many hardships and were forced to overcome the combined resistance of man and Nature to attain a position from which they could map and photograph Minya Konka and its sister peaks.

a trail through the deep snow; but the cold forbade us to move as slowly as a yak, whose normal gait is about two miles an hour.

The trail now ran through a wonderful forest, and, although we were suffering from cold, I stopped at 14,300 feet to photograph my entourage among the snow-laden firs and rhododendrons. Beyond this forest commenced the actual climb to the pass, hidden in snow clouds and a whirl of snowflakes. Just then, fortunately for us, five yaks, guided by a Tibetan woman and a man, appeared as from the sky. They had crossed the pass with difficulty, and what is difficult for yaks is often impossible for loaded mules. These yaks had plowed a trail, which by the time we reached the pass had been nearly obliterated by the blizzard.

### "THE GODS ARE VICTORIOUS"

As we ascended, the snow increased in depth and the blizzard in fury, for we were now above the timber-line. We could see nothing but a purplish white wall and I seemed lost in a whirling mass of white. Up and up we climbed until finally I saw through the haze of snowflakes a few sticks which denoted an obo, or cairn, and hence the summit. Never did I exclaim more heartily with my Tibetans, "*Lha rgellah, Lha rgellah*" (The gods are victorious), the accustomed shout of every Tibetan on a pass.

The Chiprin Pass proved to be 16,000 feet in elevation. Our descent was very difficult. Men and beasts and loads were many times catapulted into the snow, some of us sliding down into a snow bank up to our necks. Only part of our caravan reached camp that night at Chengtsi, a large Tibetan stone community house instead of a village of scattered homes. The community dwelling afforded protection against bandits.

My men and the Muli soldiers slept in the stone building, as their tents had not arrived, while I, with my personal attendants, camped along the stream, after clearing the snow from a camp site.

As the storm continued, to go on the next day was impossible. The soldiers of the Muli king and my muleteers were snow-blind and were suffering terribly. Fortunately, I had cocaine, with which I made a solution, and this I dropped into their eyes to relieve their pain. I followed this treatment with cold compresses.

South of the Chiprin Pass are immense forests. To the north, it seemed as if one had entered a different world. There not a tree could be seen; the entire landscape was a bleak waste.

### A THREAT FROM THE KONKALING BANDITS

From Chengtsi the trail leads down a pleasant valley, flanked by snow-crowned peaks, to the village of Mudju, at the confluence of two streams. This is the land of Minya, inhabited by the peaceful, sedentary Minya Tibetan tribe, a most inoffensive, obliging, happy-go-lucky people.

At Mudju I was informed that the bandit chief of Konkaling, Drashetsongpen, had arrived, with his horde of 800 outlaws, at the Yalung, and that they were then prepared to cross that river, a letter having been received from the Tibetans to that effect.

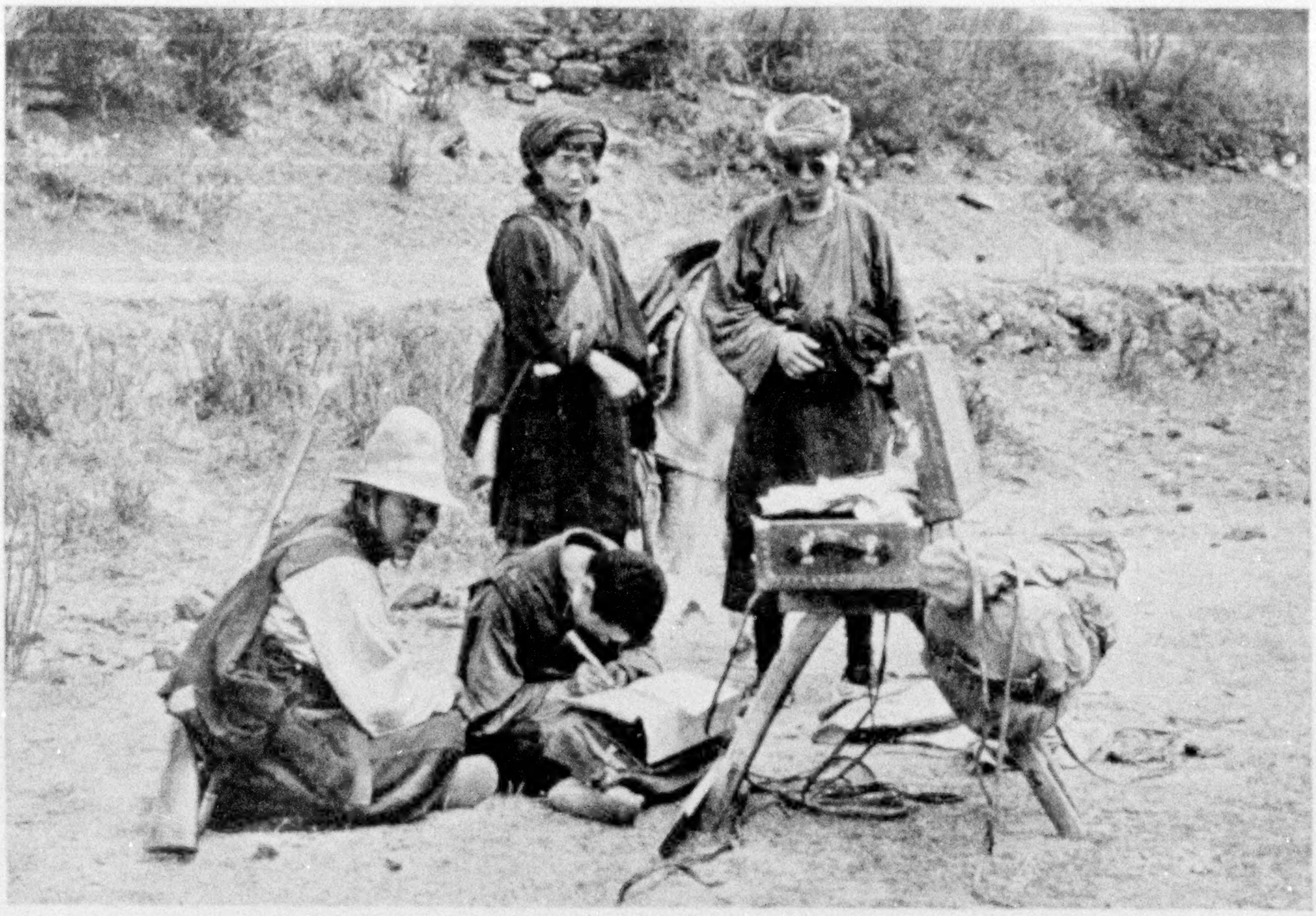
The Minya Tibetans, whose homes had been burned several times by these same outlaws, prepared to resist this advance. On previous raids the Minya people could only flee into the hills and leave their homes to the robbers, but during the last three years they had armed themselves and now meant to make a fight.

Of late the Minya Tibetans, instead of living in scattered small houses, have turned to large fortresslike community houses built of rock, looking like prisons of the Middle Ages.

So as not to fall into the hands of the Konkaling outlaws, who had threatened to rob and murder us when we attempted to visit their stronghold, the Konkaling peaks, we avoided the main road and went up a valley to Yulonghsi, where a large stone house, once a summer residence of the Chiala king, still stands.

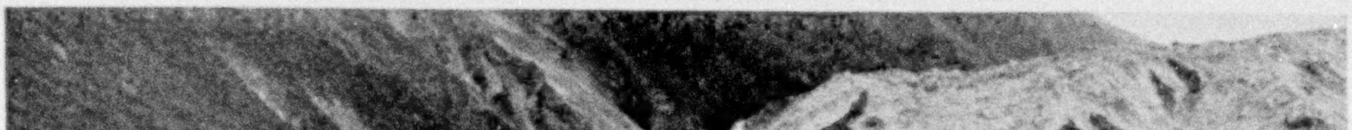
### THE FIRST GLIMPSE OF MATCHLESS MINYA KONKA

Anyone unfamiliar with the geography of the country could, even with the latest maps in hand, pass up this valley without suspecting the existence of the Minya Konka Range, crowned by one of the loftiest peaks of western China. And yet these majestic snow peaks lie just beyond the high eastern valley slopes of Yulonghsi.



WRITING A TIBETAN LETTER TO THE LIVING BUDDHA OF THE KONKA MONASTERY

As none of the members of the expedition could write Tibetan, a wandering lama encountered on the trail was prevailed on to write a letter announcing the expedition's early arrival.



THE LONELY MONASTERY OPPOSITE THE SNOUT OF MINYA KONKA GLACIER

The various buildings house deities made of mud, and a fresco of Dordjelutru, the mountain god of Minya Konka, covers one of the walls in the main upper building. The expedition stayed at this secluded monastery while exploring the glaciers and peaks of Minya Konka. Two of the establishment's four lamas are seen standing at the corner of the shed in the foreground.

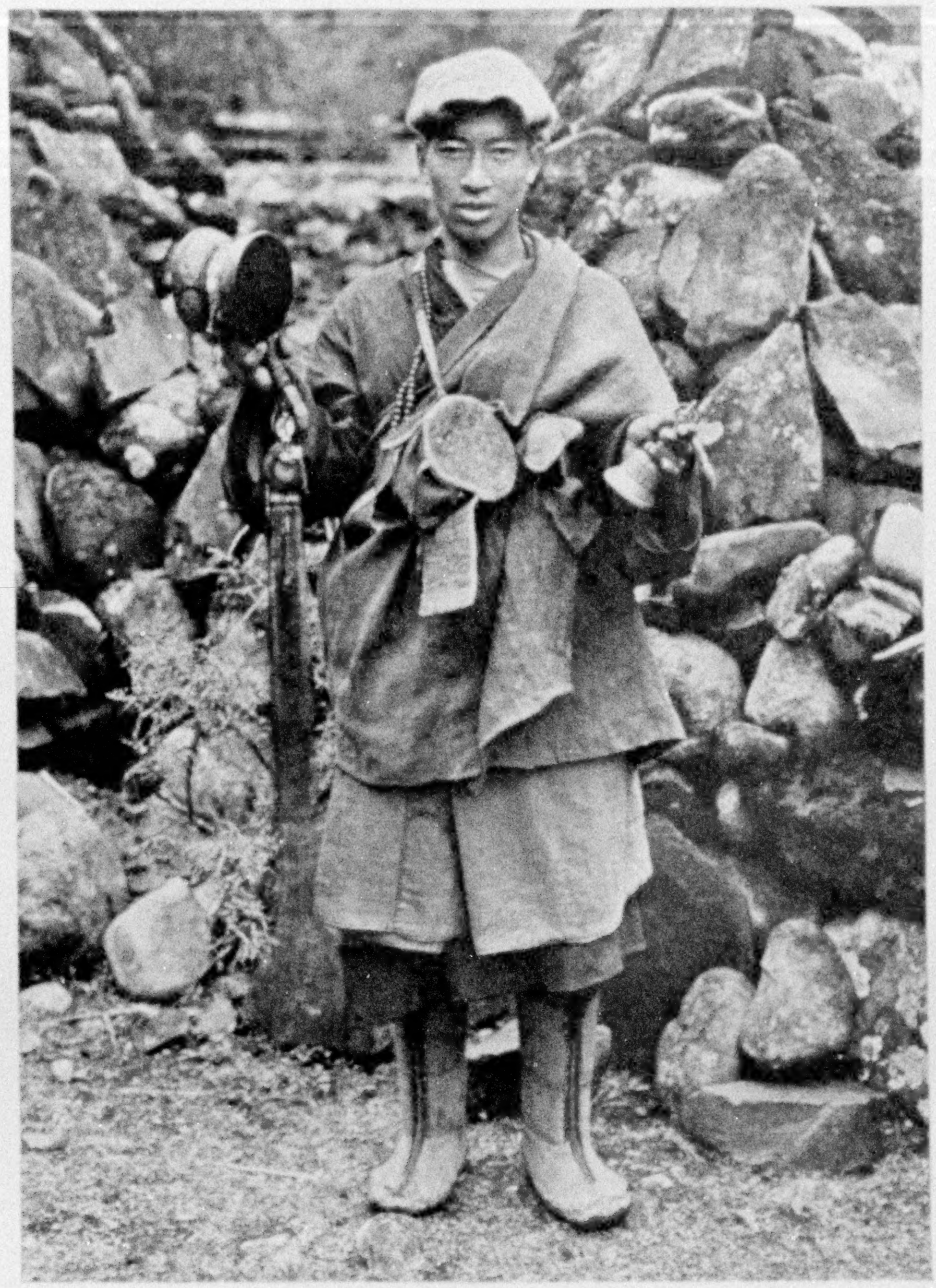
When we arrived at Yulonghsi we made ourselves at home in the late king's summer residence, now occupied by a good-natured Tibetan chief called Drombo, who bade us welcome.

Clear weather favored us, and I asked Drombo from what vantage point Minya Konka could best be viewed. He named a high rocky spur to the east, up Yulonghsi Valley, overlooking Buchü Valley.

Drombo said it would be impossible to climb the spur on account of the deep snow, and he kept up whining laments when we insisted upon his acting as our guide.

When we reached 15,000 feet we found the snow lay deep on the spur; but, fortunately for us, it was frozen, and, as it bore our weight, we advanced cautiously to 16,500 feet.

And then suddenly, like a white promontory of clouds, we beheld the long-hidden Minya Konka rising 25,600 feet in sublime majesty (see Color Plates I, VIII, and X).



ON A BEGGING TOUR FOR HIS MONASTERY

The itinerant lama allows people to acquire merit by giving him money. In his right hand he holds a hand drum and in his left a bell.

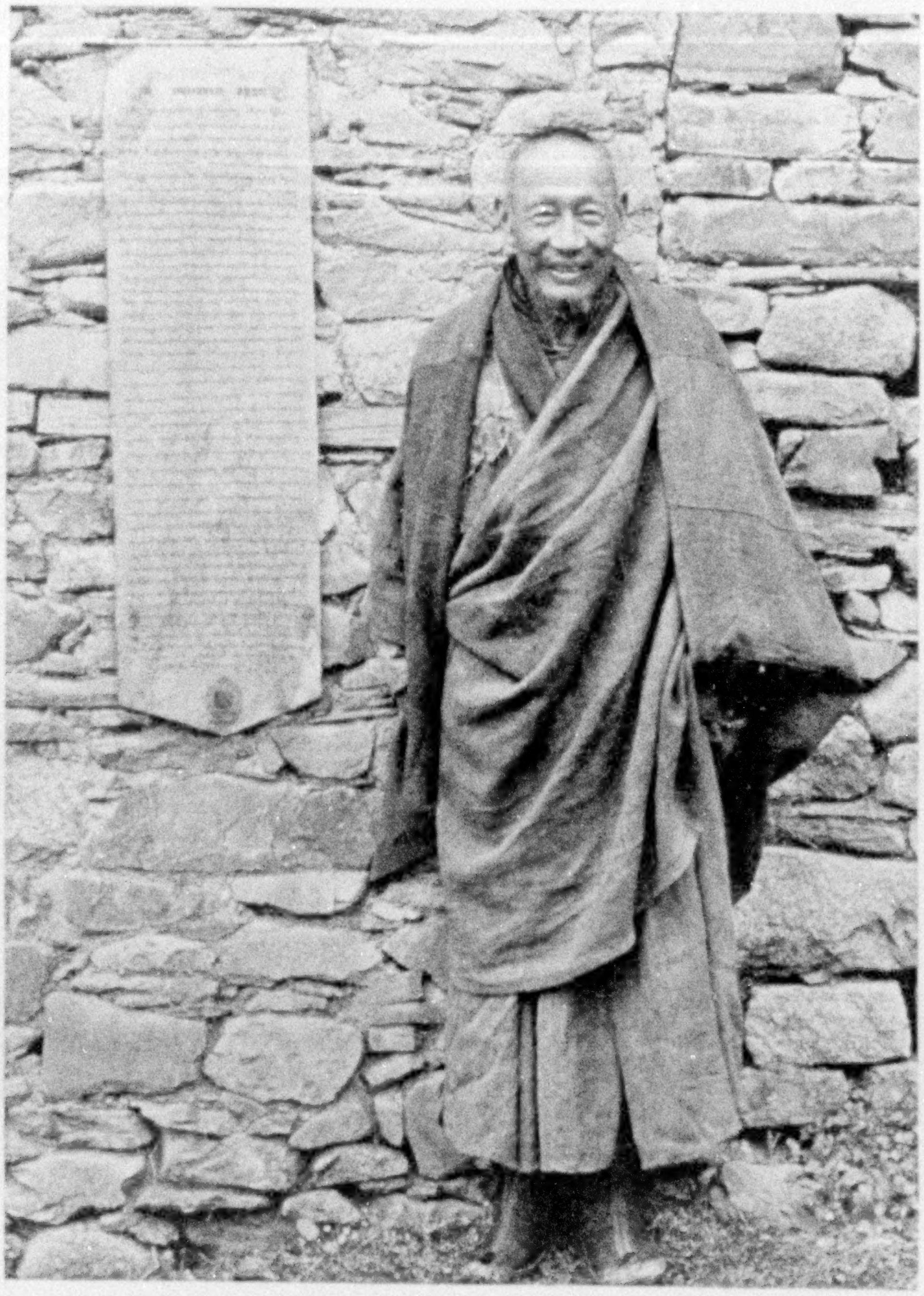
I could not help exclaiming for joy. I marveled at the scenery which I, the first white man ever to stand here, was privileged to see.

An immense snowy range extended from north to south, and peerless Minya Konka rose high above its sister peaks into a turquoise-blue sky. A truncated pyramid it is, with immense lateral buttresses flanked by an enormous glacier many miles in length. This glacier, in turn, is joined by another coming directly from Minya Konka itself.

To the south and a little to the west a peak called Nyambö Konka forms the end of the Minya Konka chain.

Each peak sends a glacier and stream into V-shaped Buchü Valley, which extends the entire length of the range. Another smaller valley, Konka Longba, or "The Valley of the Snow Peaks," into which the main glaciers of Minya Konka discharge, joins Buchü Valley, and then, as the Tsauku Valley, sends a torrent into the Tung River.

The most beautiful peaks next to Minya Konka, and rising immediately to the north, are Longemain and Daddomain. As subsequent computations of the clino-



THE TREASURER OF THE KONKA GOMBA (SNOW MONASTERY)

Behind the smiling worthy hangs a strip of hemp cloth, mellowed by age, on which the history of the monastery is written in Tibetan cursive style (see text, pages 426 and 435).

metrical observations showed, these reach heights of 22,500 and 21,500 feet respectively. Fleecy clouds rested on their summits, as I saw them, and they appeared united by a gracefully curved spur. On their western slope the snow line descended to 18,000 feet.

## THE TIBETAN SEEMS CONTENTED WITH HIS HARD LOT

The scenery was superb. Indeed, words fail to describe this marvelous panorama, which until I came no white man had viewed from such close range.

As spring is the most difficult season in which to travel in these regions, owing to heavy snowfalls, we delayed further exploration of the Minya Konka Range. In the meantime I decided to cross Djesi Pass, the northernmost pass, and journey three days to the northeast, to Tatsienlu.

The Djesi Pass was deep in snow and our mules and horses, especially the former, suffered terribly, as they floundered belly-deep in drifts.

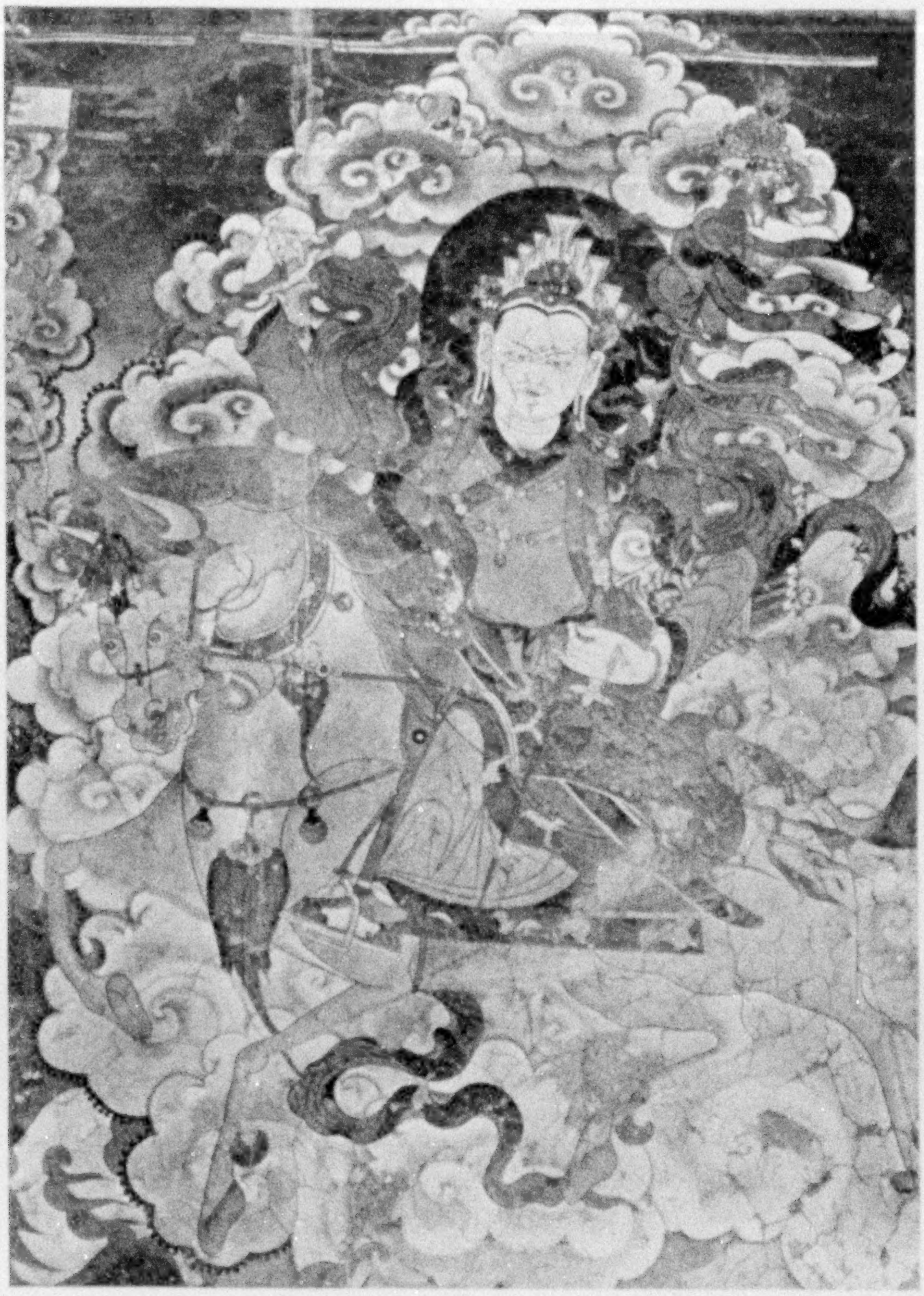
On the northeastern side of the pass snow lay still deeper. Our yaks, however, seemed to enjoy the situation greatly; although fully laden, they would lie down in the snow as if it were the most comfortable place in the world!

These yaks and their nomad owners seem to be kindred spirits. They behold the same dreary landscape, bare hills, and grassy valleys; endure long winters and short summers, with no spring or autumn to speak of. The nomad faces the prospect of being annually looted by the Konkaling bandits, which engenders an imperturbable disposition. Ignorant of the outside world, these people seem entirely contented with their hard lot. They are born, live, and die not only in the same skin, but, one might almost say, in the same clothes, with those insect associates from which a Tibetan is never free. The minute a nomad enters a room the air smells of yak butter, sour milk, and yak-dung smoke, to say nothing of the fragrance peculiar to an unwashed Tibetan himself.

Before climbing the Djesi Pass, we camped opposite a spur with a small stone altar used for burning juniper boughs as an offering to the mountain god. Such altars are always built at a point from which worshipers may enjoy a beautiful, unobstructed view of a sacred peak or peaks.

The next day, a glorious one, we climbed the spur opposite our camp to an elevation of 16,500 feet, and there secured another set of photographs and bearings which helped to locate the various peaks. Seen from this second vantage point, Minya Konka appears as a triangular peak not unlike one of the pyramids of Egypt. A light, transparent veil of clouds here enshrouded the very apex of the peak, allowing the contours to be seen (see page 416).

The walls of Minya Konka are of a blackish gray rock and are apparently granite, as is the entire Djesi Valley, which extends from the northern end of the range to Tatsienlu. From the Djesi Pass extends the Tsidji Valley, which is the upper part of Djesi Valley. Here a glacial stream flows down a narrow defile and ends in a waterfall at the foot of Riuchi Valley.



DORDJELUTRU, THE MOUNTAIN GOD OF MINYA KONKA

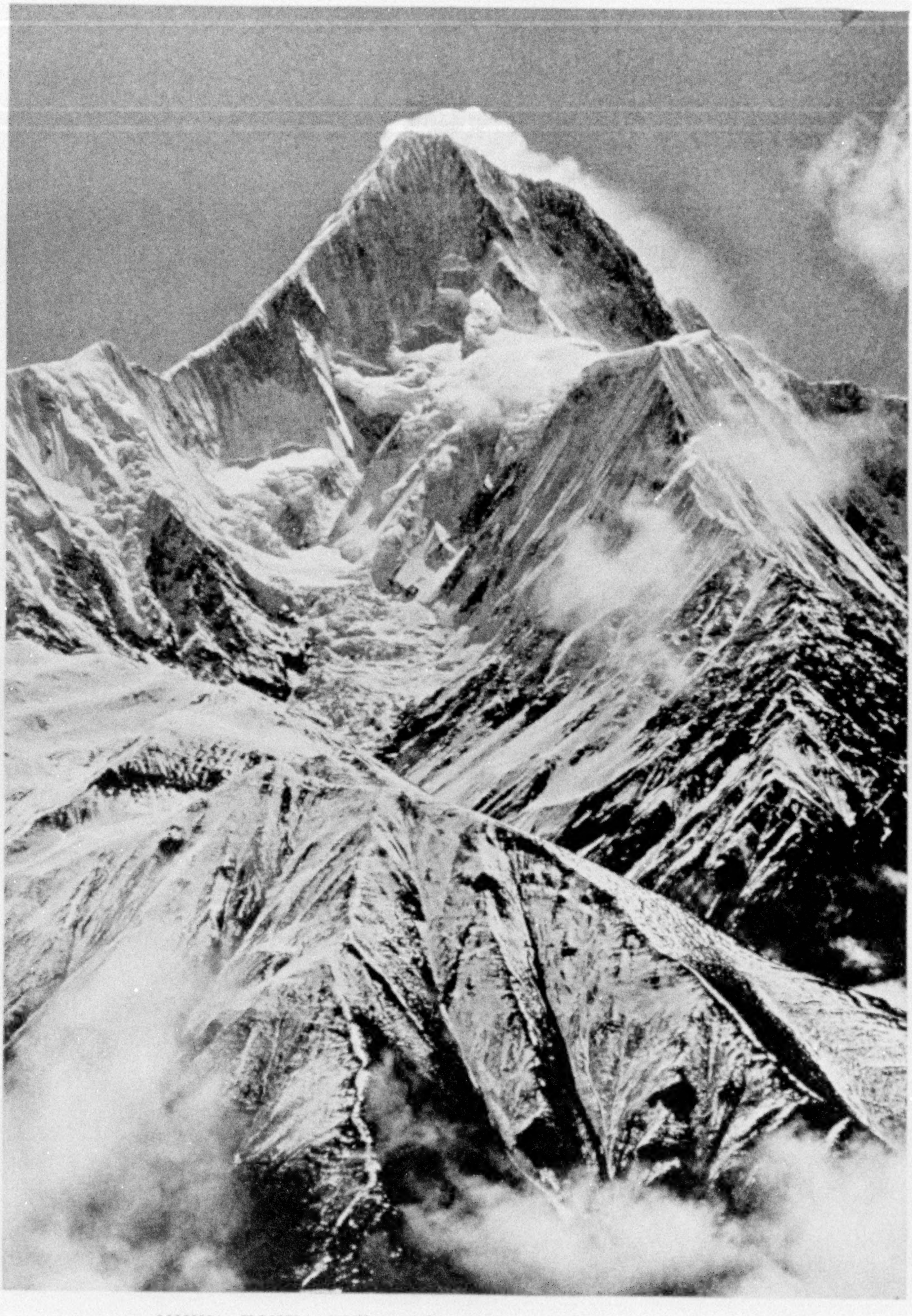
In this fresco, which adorns the wall of the Konka Monastery, the deity rides a fiery steed through the clouds. Dordjelutru is believed to reside in the highest peak of the Minya Konka.

### LOFTY SNOW PEAK NAMED FOR PRESIDENT OF THE SOCIETY

With the hope of securing a view of Minya Konka from the west, I explored Riuchi Valley, which is flanked on the east by a row of peaks more than 20,000 feet in height, with glaciers filling its upper valley floor.

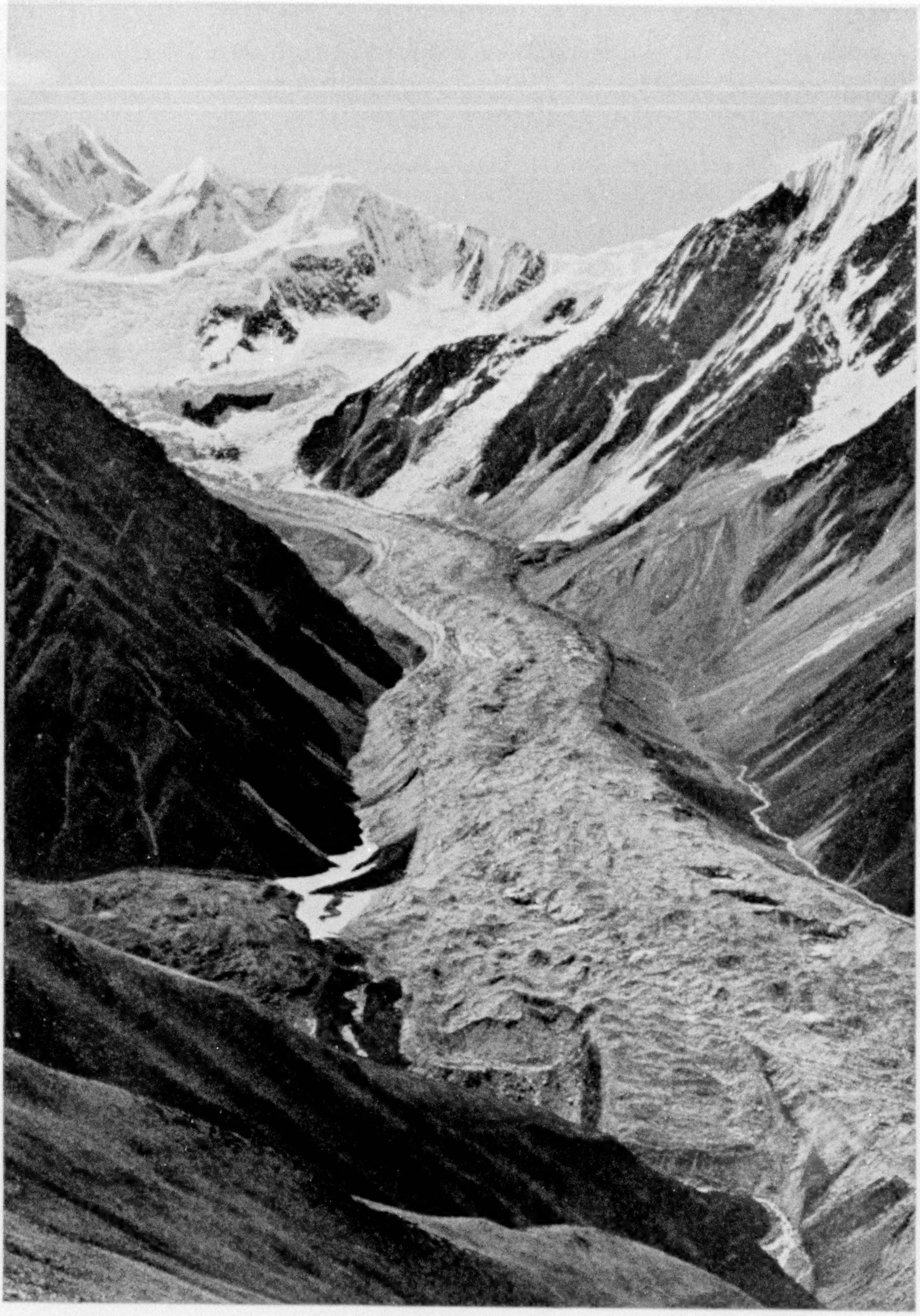
Three peaks of great beauty, the easternmost of the main range, flank Riuchi Valley, which is so named from the central peak, with Chiburongi Konka to the north and a nameless pyramid to the south, which I called Mount Grosvenor in honor of the President of the National Geographic Society (see Color Plates VII and X). The rocks of these peaks appear to be composed of yellowish red gneiss. It is this range which is visible from the mountains above Tatsienlu, and *not* Minya Konka.

One of the finest peaks overlooking the head of Riuchi Valley and also the Djesi Pass is an enormous snowy mass of great beauty, Reddomain Solo, 23,000 feet in height (see Color Plate XII). This had been mistaken by the missionaries of



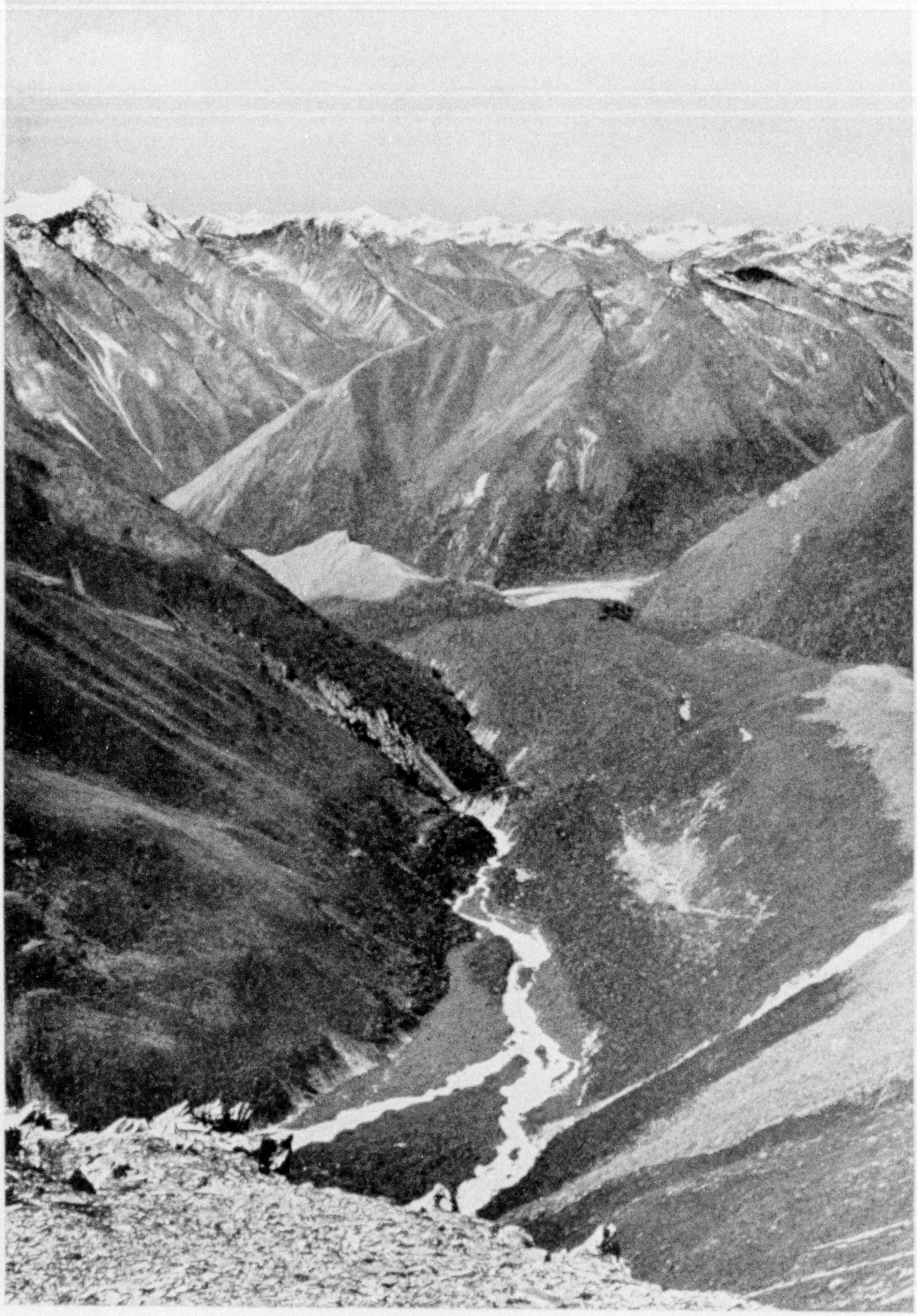
MINYA KONKA WITH HER CLOUD VEIL THROWN BACK

Mighty glaciers descend from its numerous peaks into the deep, narrow, V-shaped Buchü Valley, which debouches into Tsauku Valley at the southern extremity of the range. Photographed from an elevation of 16,500 feet, east of Yulonghsi, with only the front lens of the camera (see, also, Color Plates I and VIII).



A VIEW UP THE MAIN GLACIER OF THE MINYA KONKA RANGE

On the surface of the glacier are numerous small pools of yellowish-green water. The small lake to the left is between the junction of the narrow glacier which descends from Minya Konka and the Nyambö Glacier. The photograph was made from an elevation of 17,000 feet, from the spur separating Konka Valley from Buchü Valley.

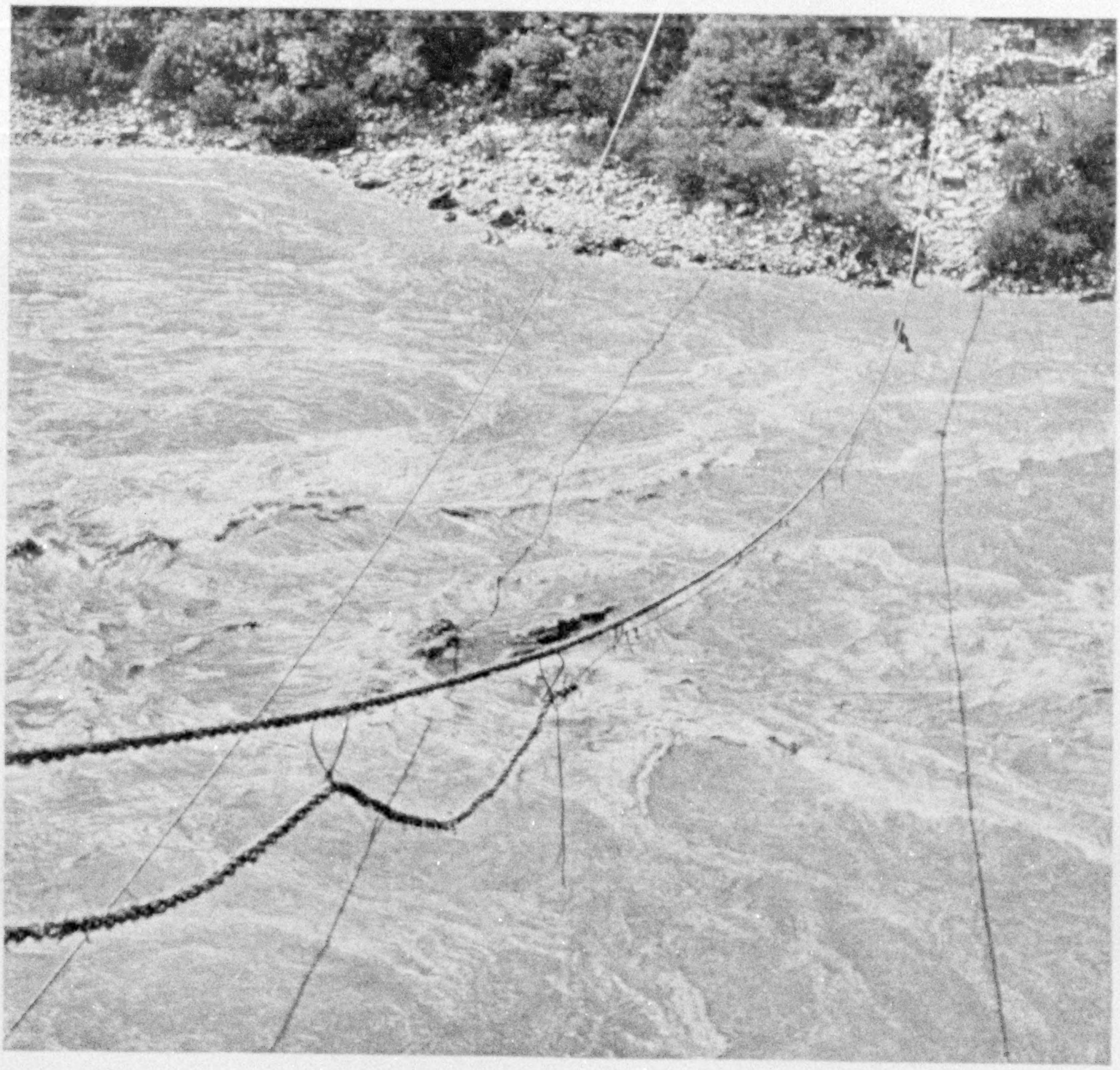


LOOKING DOWN THE KONKA VALLEY FROM AN ELEVATION OF 16,900 FEET

Konka Gomba (Monastery) can be seen on the right wall of the valley, 3,600 feet below. In the distance, in a line with the monastery, at the foot of the mountains in the background, can be seen the hamlet of Tsemi.

A MAGNIFICENT BIRCH FOREST IN A SIDE GORGE OF THE YALUNG

The steep sides of these ravines support a heavy growth of spruce, oak, and birch. Here it is so thick and the shadows so deep that the trees all bend toward the narrow, rocky stream bed. The elevation is 13,000 feet and most of the trees visible are birches.



SUSPENDING A NEW BRIDGE ACROSS THE YALUNG

The bridge-builder slides over the old rope, trailing a string to which one end of the new rope has been fastened. The new rope is supported below the old rope by means of willow twig loops, and it is then pulled across the river. The rope consists of five strands of twisted cane-stalks and when in frequent use lasts about three months (see, also, page 435).

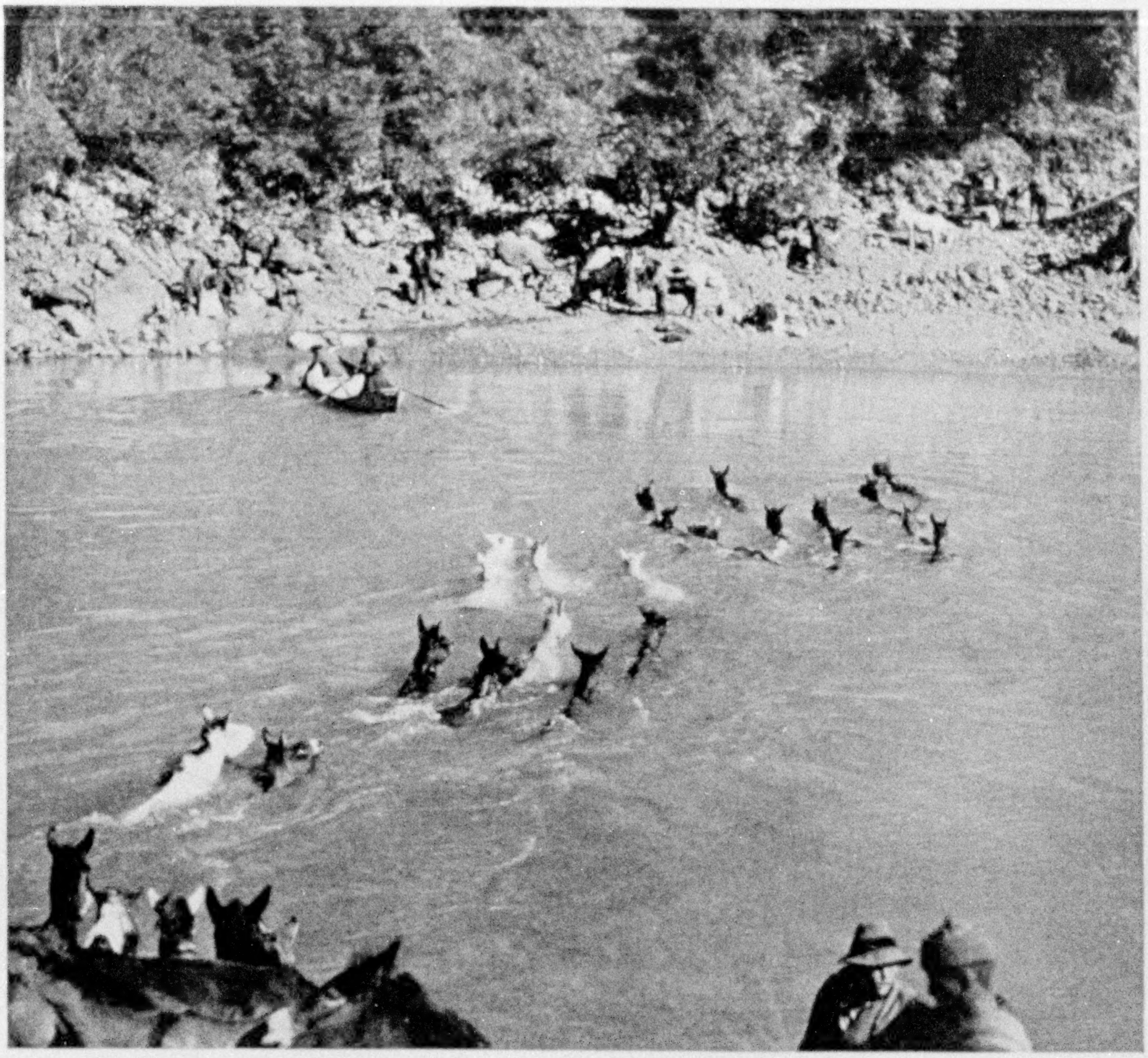
Tatsienlu for the Minya Konka, which is, however, visible from the Djesi Pass, but only on perfectly clear days, and even then only a small part of its apex proper can be seen.

There are many more peaks belonging to the Minya Konka system. Some are well over 20,000 feet in height. From Reddomain Solo a second parallel snow range extends back of the one of which Minya Konka is the highest, and the Riuchi Range might be looked upon as the continuation of the Reddomain Solo Range. There remains yet another range nearer to Tatsienlu, which seems to fill the Djesi Valley when looking down from below the Djesi Pass. This is the 22,000-foot Yachagan, with its two central pyramidal peaks cleft by a deep chasm.

We sojourned nearly two weeks in Tatsienlu to develop color plates and films, replenish our provisions, and incidentally give our men and animals a rest. Then we returned to the Minya Konka Range to explore to our hearts' content, again making Yulonghsi our headquarters.

### TRIP TO THE GLACIERS ORGANIZED

Determined to ascend its glaciers, we arranged with Drombo and another Tibetan, a friendly soul by the name of Jumeh, to guide us to Konka Gomba, a tiny monastery at the very foot of the glacier of Minya Konka.



THE ANIMALS OF THE EXPEDITION SWIM THE LITANG RIVER SOUTHWEST OF KULU

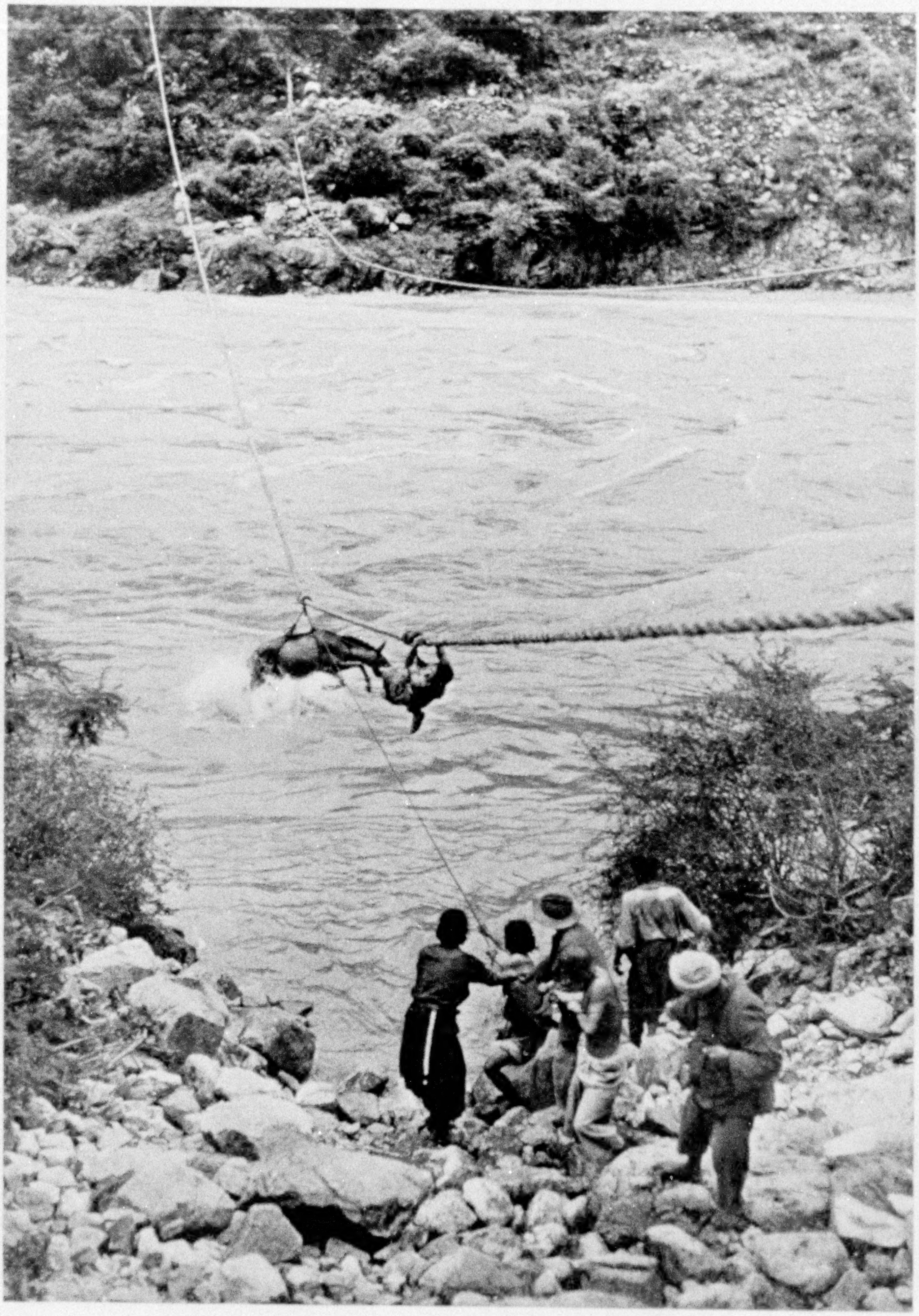
It was necessary to make proper arrangements, so we sent word and presents to the living buddha of the monastery, who belongs to the Karmapa, a branch of the red sect. The buddha, to whom I had a letter of introduction from the Muli king, was very friendly indeed and sent his uncle, the treasurer of the lamasery, and a few minor lamas to escort us.

Leaving part of my entourage to collect plants in the Yulonghsi Valley, I set out with the remainder for the tiny monastery at the foot of Minya Konka's mightiest glacier. There remained only the favor of the mountain god Dordjelutru to grant us a clear sky and to assure the success of our expedition.

It was now early in June, but Yulonghsi, which is itself at 13,800 feet elevation, was still cold and bleak. While camping below the Tsemi Pass, over which our trail led to the monastery, we had such a heavy snowfall during the night that our tents collapsed from the weight of it. From the Tsemi Pass, at an elevation of nearly 16,000 feet, we had a wonderful view southwest, showing another snow range with 20,000-foot peaks.

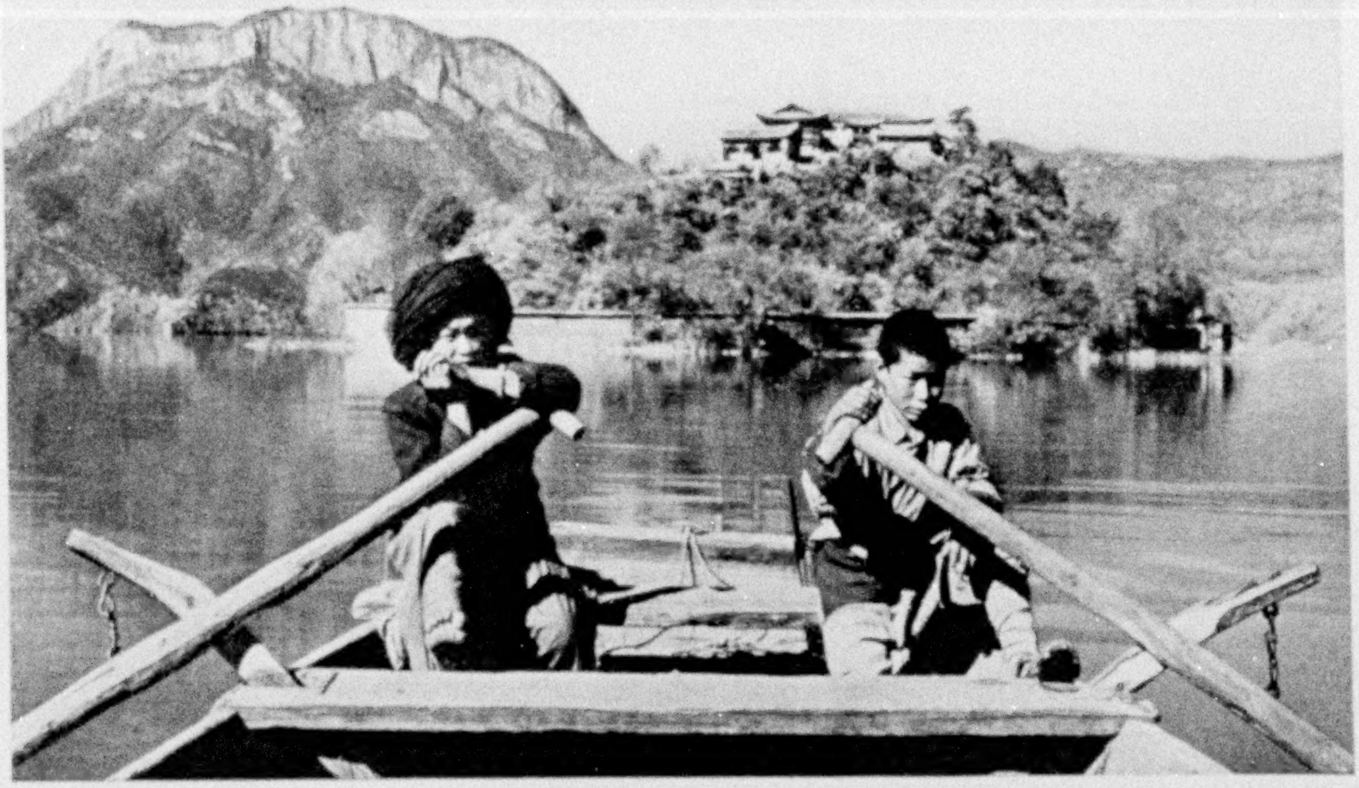
Minya Konka remained hidden in mist, save for a moment when the truncated apex appeared above a billowy cloud sea.

From the Tsemi Pass the trail descends in a long zigzag into the Tsemi Valley, named after a Tibetan hamlet near its mouth, and at the base of 21,000-foot Nyambö Konka, the southernmost peak of the range. The lower part of the valley is densely forested with spruce, birch, and rhododendron, and higher up with oaks. We crossed the Buchü stream and climbed the spur separating Buchü from Konka Valley, and then ascended the latter to the



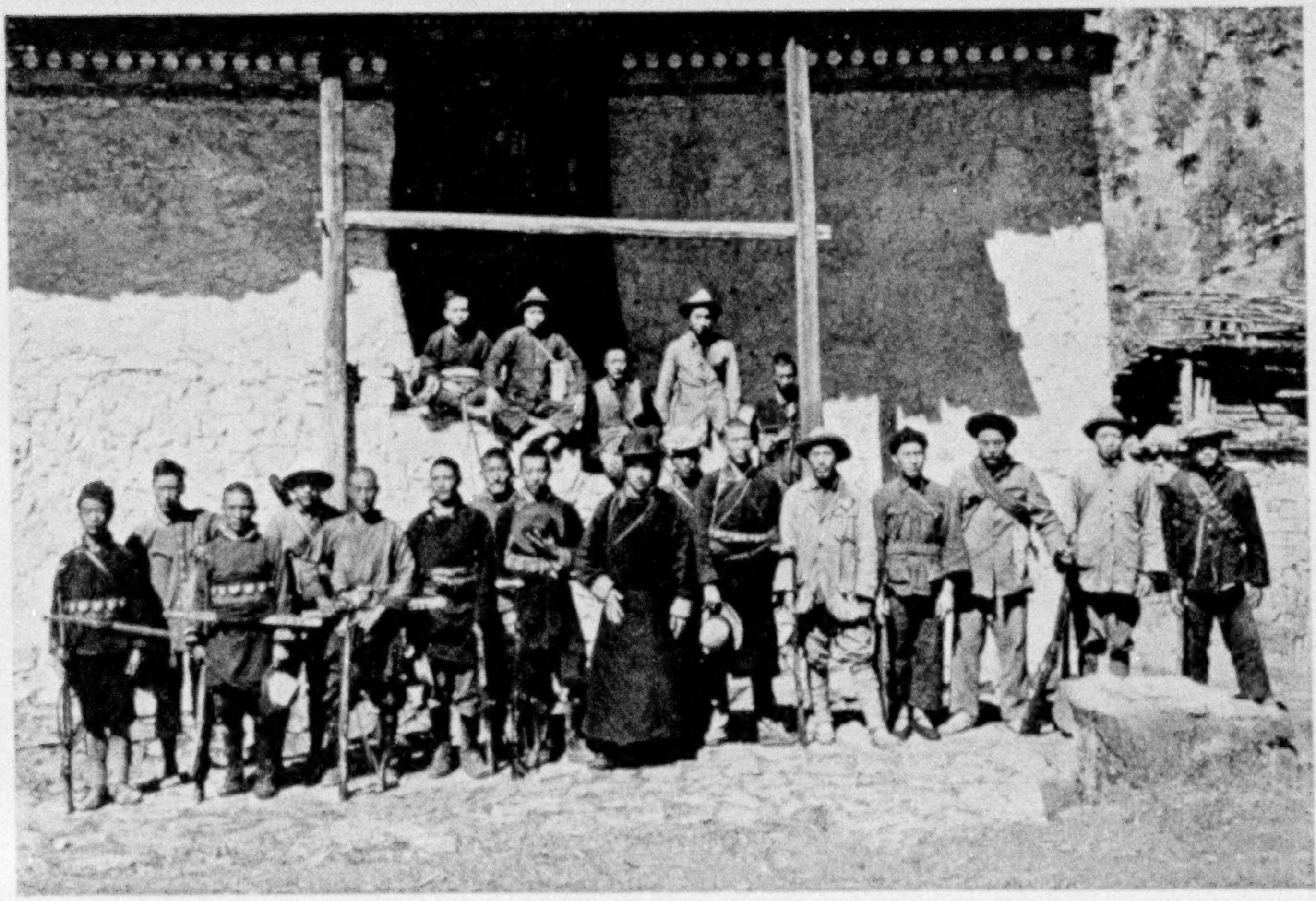
A MULE SLIDES ACROSS THE YALUNG AT BAURONG

The pack animals kicked and brayed and objected strenuously to this method of crossing the river. As they arrived on the side to which they were destined, they would slide to a halt quite a distance from the river bank. Then a man would fasten himself to a slider and work his way down to the frightened creature, crawl over its back, fasten a rope over the slider, and pull him in (see, also, text, page 435).



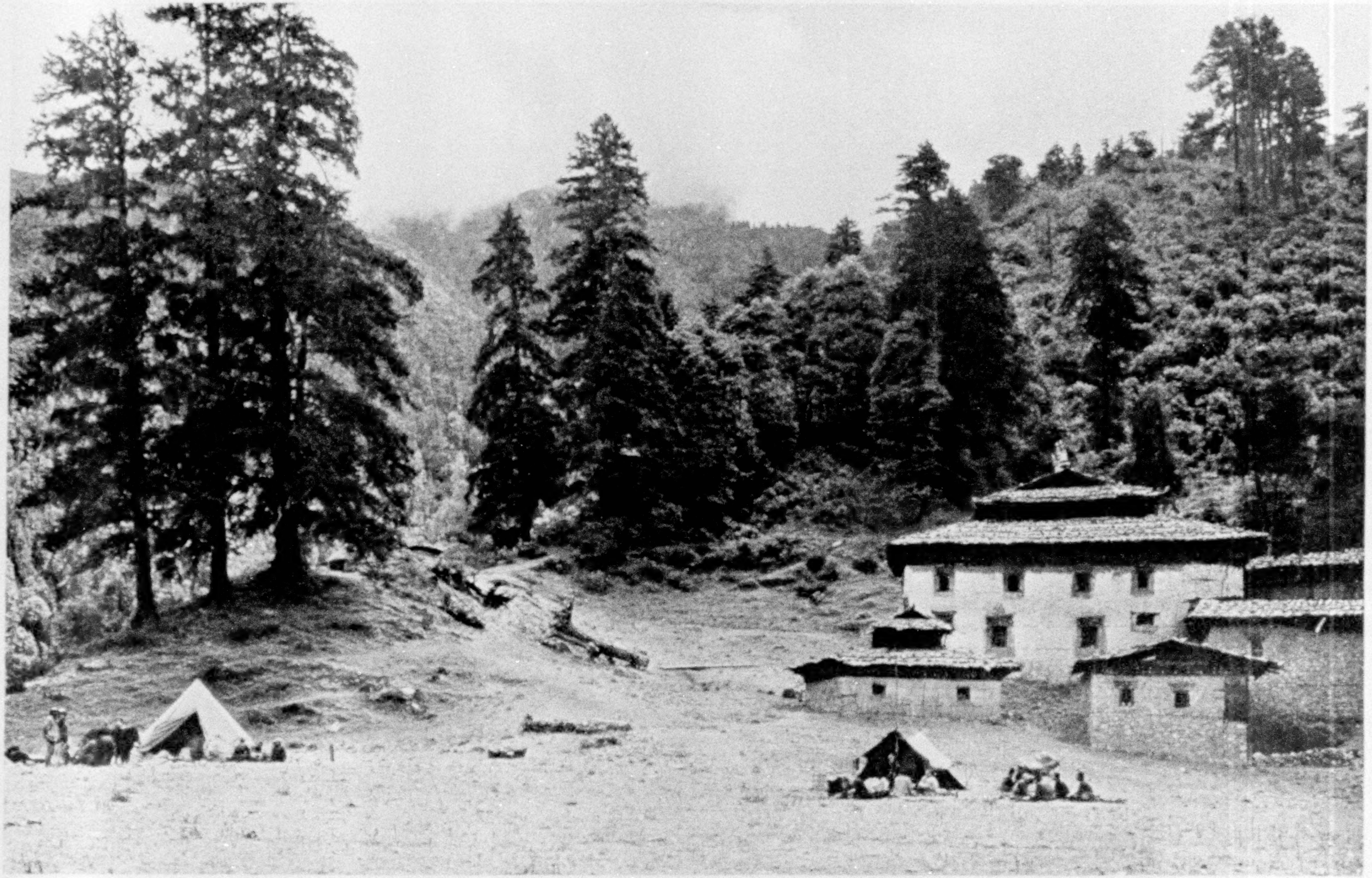
ROWING OUT TO THE ISLET OF NYOROPHU (SEE, ALSO, PAGE 425)

In the distant background looms Lion Mountain.



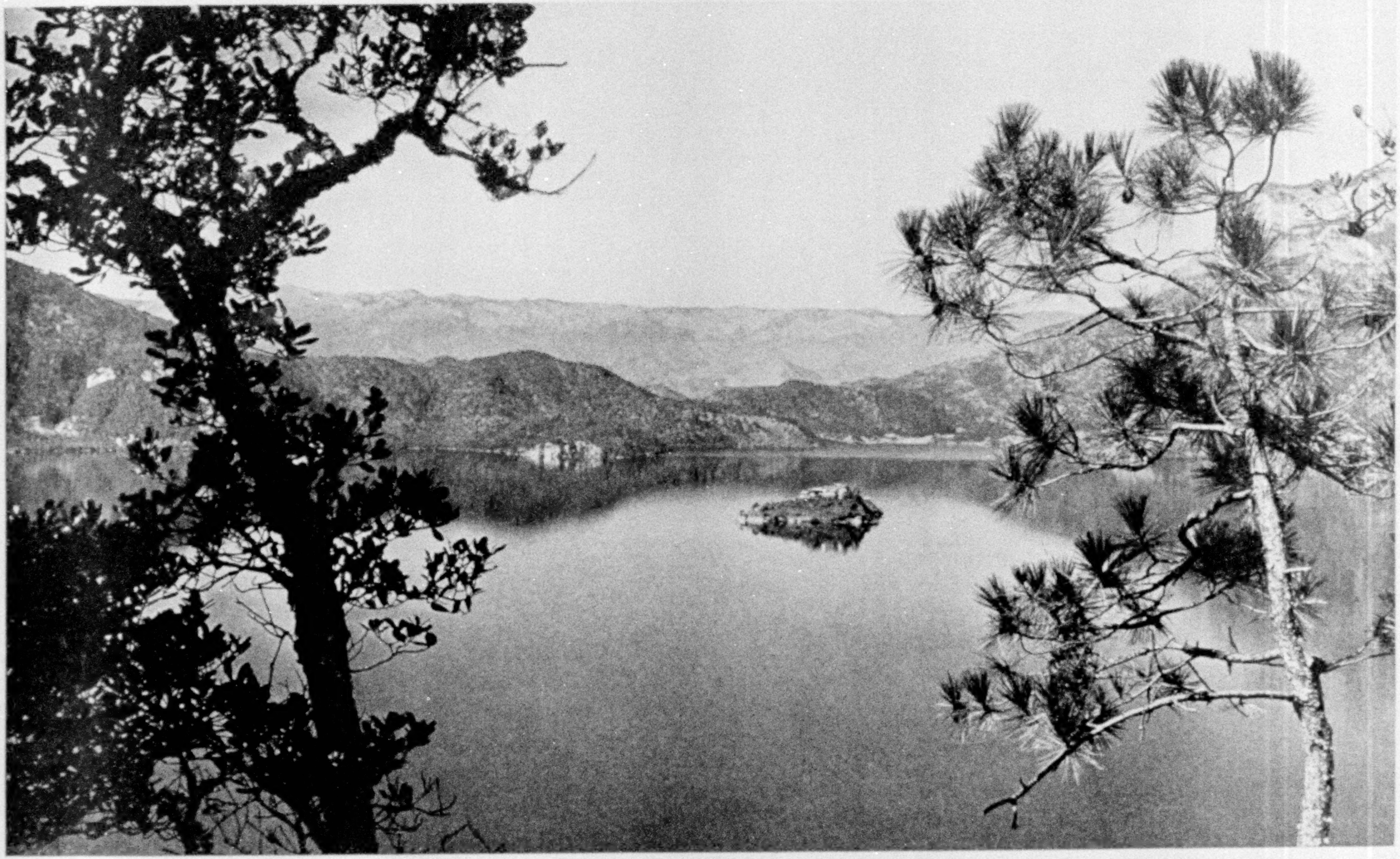
THE ABBOT OF YOUNGNING IN THE CENTER

Some of the expedition's escort and assistants outside the shrine of Balden Lhamo, the dread demoness who is said to have once dwelt in this place, Rendjom Monastery, in Muli territory.



BARON GOMBA, A SMALL LAMASERY, EAST OF THE YALUNG AND NORTH OF BAURONG

Here the expedition camped and rested one day before descending into the hot Yalung Gorge. The large building is the chanting hall, or main temple.



THE ISLET OF NYOROPHU, A PLACE OF REFUGE, IN YOUNGNING LAKE

On this island the leader of the expedition found sanctuary for two months. He was finally aided in his escape from the tightening clutches of rebel and bandit hordes by a Mongol tribal chief who claimed descent from Kublai Khan (see text, page 437).

very toe of the huge glacier, to the left of which the lonely monastery is situated.

The living buddha's uncle had gone ahead, and with the four monks who spend their lives here in prayer and meditation, received us outside the monastery, a most secluded and peaceful spot.

### FOUR MONKS ARE SHUT OFF FROM WORLD SIX MONTHS A YEAR

For six months in the year this monastery is shut off even from that remote world represented by the yak herders of Yulonghsi, for the Tsemi Pass is snowbound and impassable.

We were escorted into a square stone house having a courtyard filled with mud, and up over an old sagging stairway to a balcony which led to a chanting hall and a narrow room with a chapel on one side. This was the residence of the living buddha, who at the time of our visit was staying at the new monastery of Luli, near Yulonghsi.

A small window overlooking the glacier valley permitted a perfect view of Minya Konka under favorable weather conditions, but it was not then visible.

A fresco on the wall represented the mountain god Dordjelutru, of which Minya Konka is the manifestation (see illustration, page 415). In the dim chapel there stood a golden chorten studded with semiprecious jewels and, as my camp cot faced the latticed chapel door, the chorten remained in full view.

Knowing that a chorten usually contains relics, I asked the treasurer what might be in it. He explained that it served as the final resting place for the body of a former incarnation of the living buddha, who had died some sixty years ago.

The Karmapa sect is much older than the yellow sect. The treasurer stated that this monastery was more than 600 years old. Its appearance did not belie the statement.

### A WEIRD NIGHT WITH A MUMMY FOR COMPANION

All was quiet and hushed, as I lay on my camp cot facing the tomb of the buddha whose room I occupied. Outside, the glacier stream roared, the thunder rolled, and Dordjelutru staged an electrical display in this weird canyon. I shivered. Here, all alone, in the presence of a sacred mummy in a hoary lamasery, I listened to the tempest breaking over the icy peak of Minya Konka. Was this the year 1929, or had time been set back a thousand years? Did I dream, or was it all reality?

I was lost in deep meditation when I suddenly became aware of the presence of four lamas, who had quietly entered my somber room. A tiny butter lamp was lighted and placed before the remains of the buddha, and then the quartet began to mumble prayers in deep basso voices. One lama wafted juniper incense as an offering to the dead. All at once a shower of barley grains descended over my cot and on to the chorten containing the mummy.

Every afternoon for more than half a century the buddha has received this daily homage.

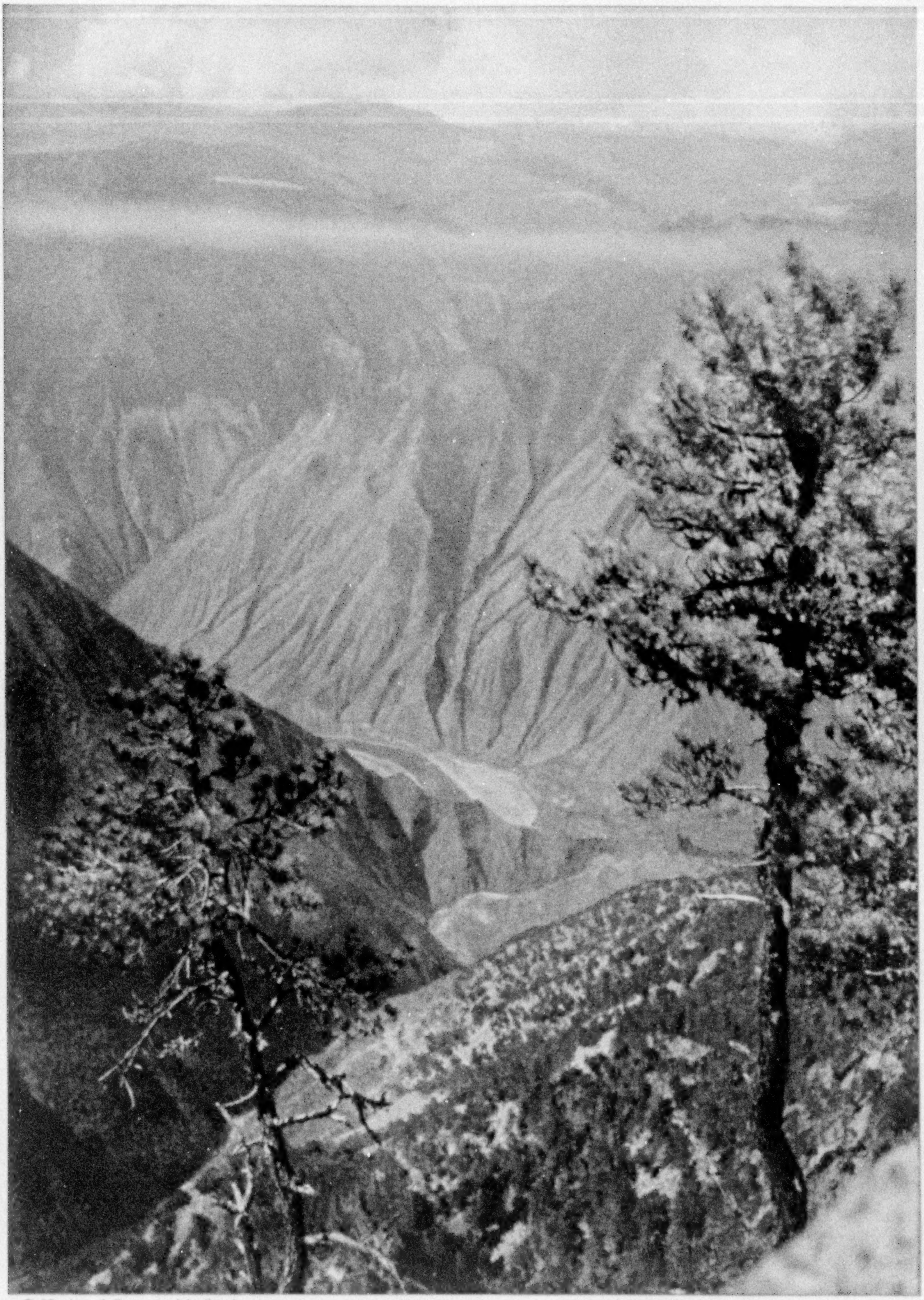
The little monastery, built on a narrow terrace above the glacier stream, stands in a very bower of gorgeous rhododendrons (see Color Plate IV).

### A TIBETAN WARNING TO HERETICS

The mountain god apparently looked with favor on our visit. The following morning, when I rose at 4 o'clock and beheld the giant peak cold and gray in a blackish green cloudless sky, I called my men, and after a hasty breakfast we climbed the forested slopes back of the monastery to the spur separating the Buchü and Konka valleys. For hours we climbed the steep slopes through a wonderful mosaic of colors of various alpine flowers. Finally we reached the narrow, rocky backbone of the ridge at 17,200 feet and found it a mass of broken, loose schist and slate. The sun was over Minya Konka and no clouds as yet had made their appearance save in the shape of a long veil which stretched eastward from the very brow of the peak.

I sat on a bowlder and drank in the grandeur and beauty of the bold scene. Far below, barely visible as a mere speck, was the lamasery (see illustration, page 418). When I had absorbed a lasting mental picture of the majestic panorama, we descended.

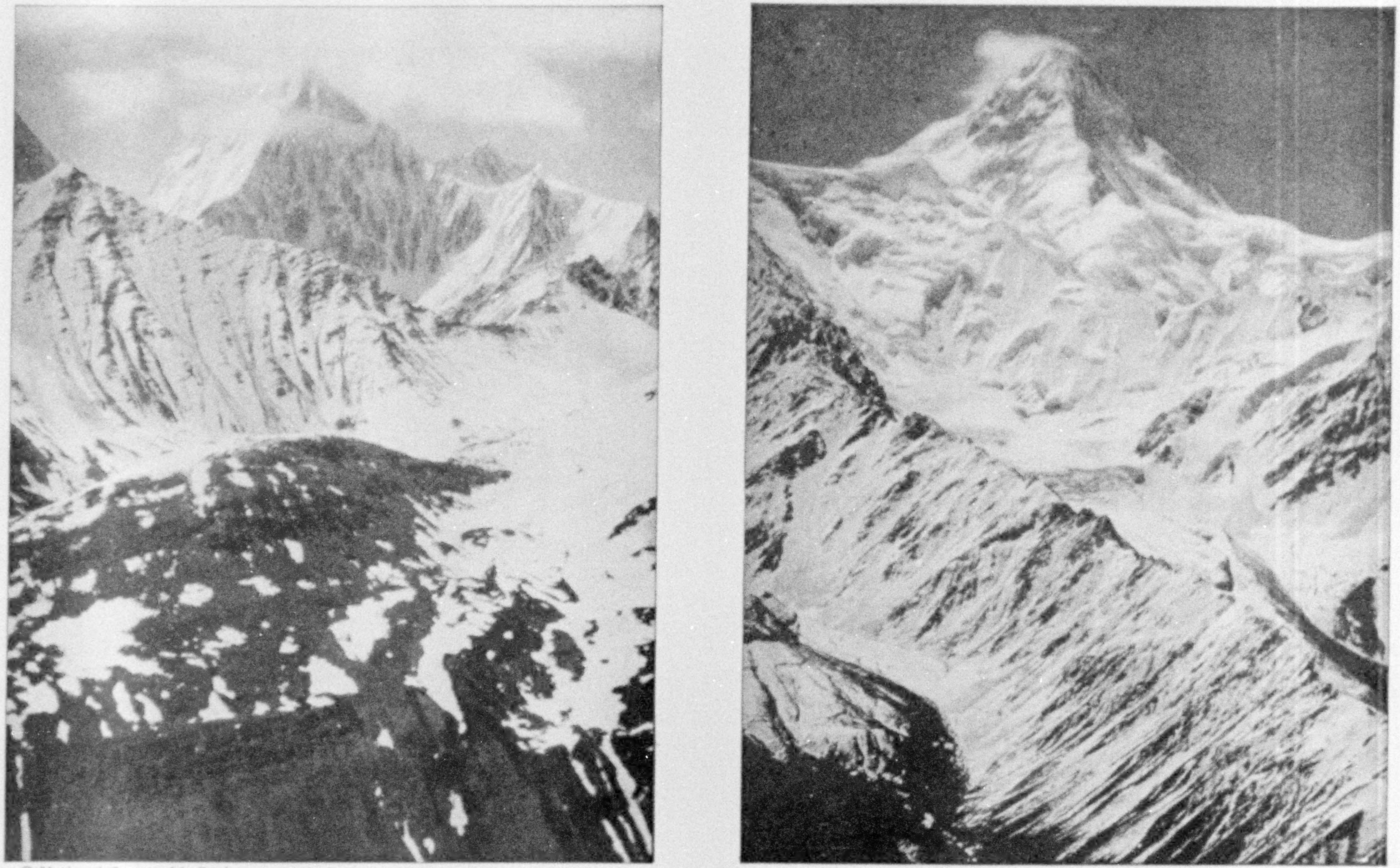
On the gate to the chapel in my room hung a long strip of hempcloth with a Tibetan inscription. I was told it dealt



© National Geographic Society Natural-Color Photograph by Joseph F. Rock

THROUGH MILE-HIGH CLIFFS THE YALUNG RIVER WINDS ITS TORTUOUS WAY

In the course of unnumbered centuries this great stream in western China has cut a gorge through thousands of feet of earth and rock. Its waters finally mingle with those of the Yangtze to complete their journey to the sea. This section of the Yalung gorge is to the northeast of Mutirong, in Muli territory.



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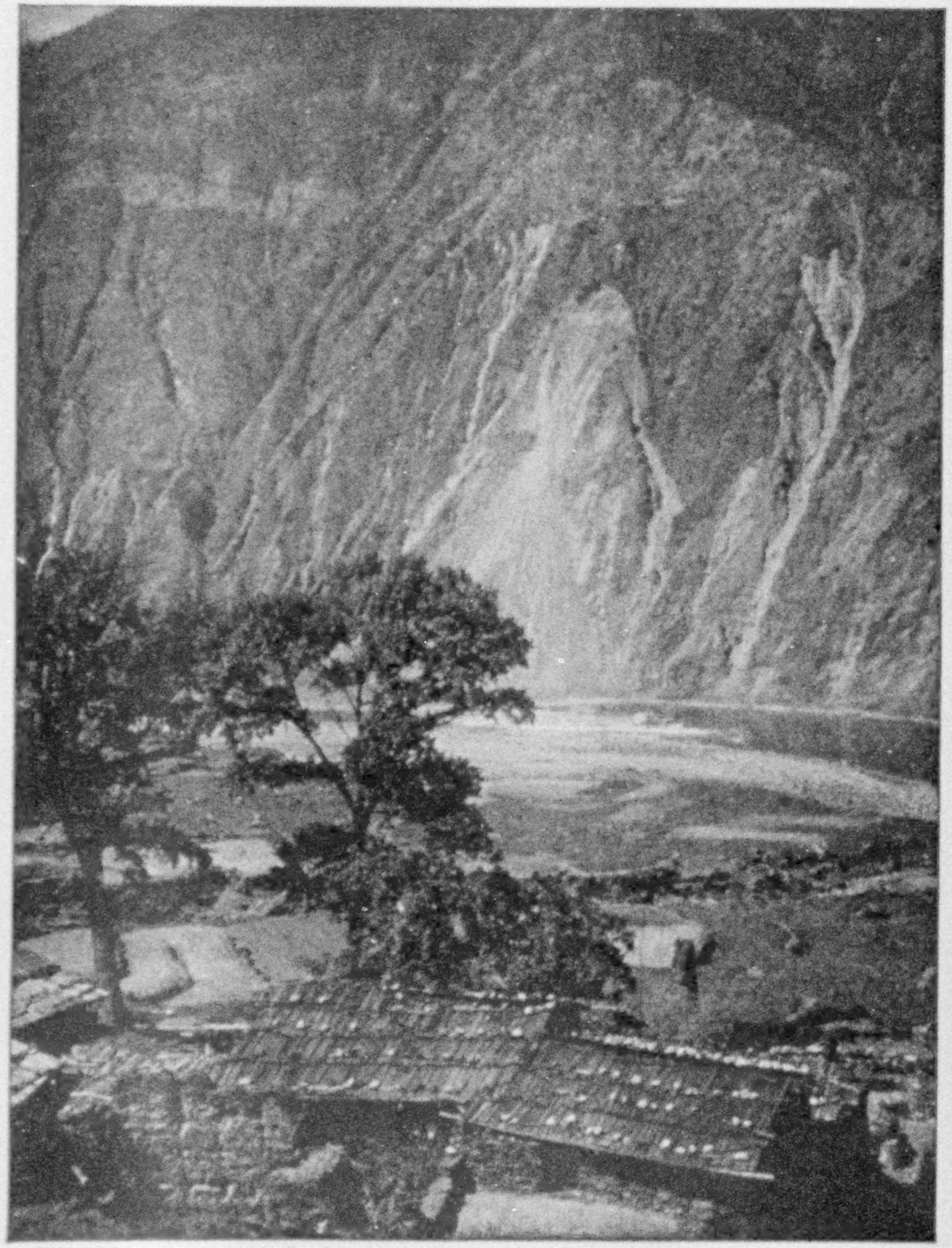
SNOW-CLAD PEAKS HITHERTO UNPHOTOGRAPHED AT CLOSE RANGE

At the left is Mount Grosvenor, a mass of gneiss and granite which towers 20,000 feet above sea level. This peak was named by the explorer, Dr. Joseph F. Rock, in honor of the President of the National Geographic Society. Minya Konka, queen peak of its range (see also Color Plate I), is seen at the right with a wisp of cloud clinging to its summit.



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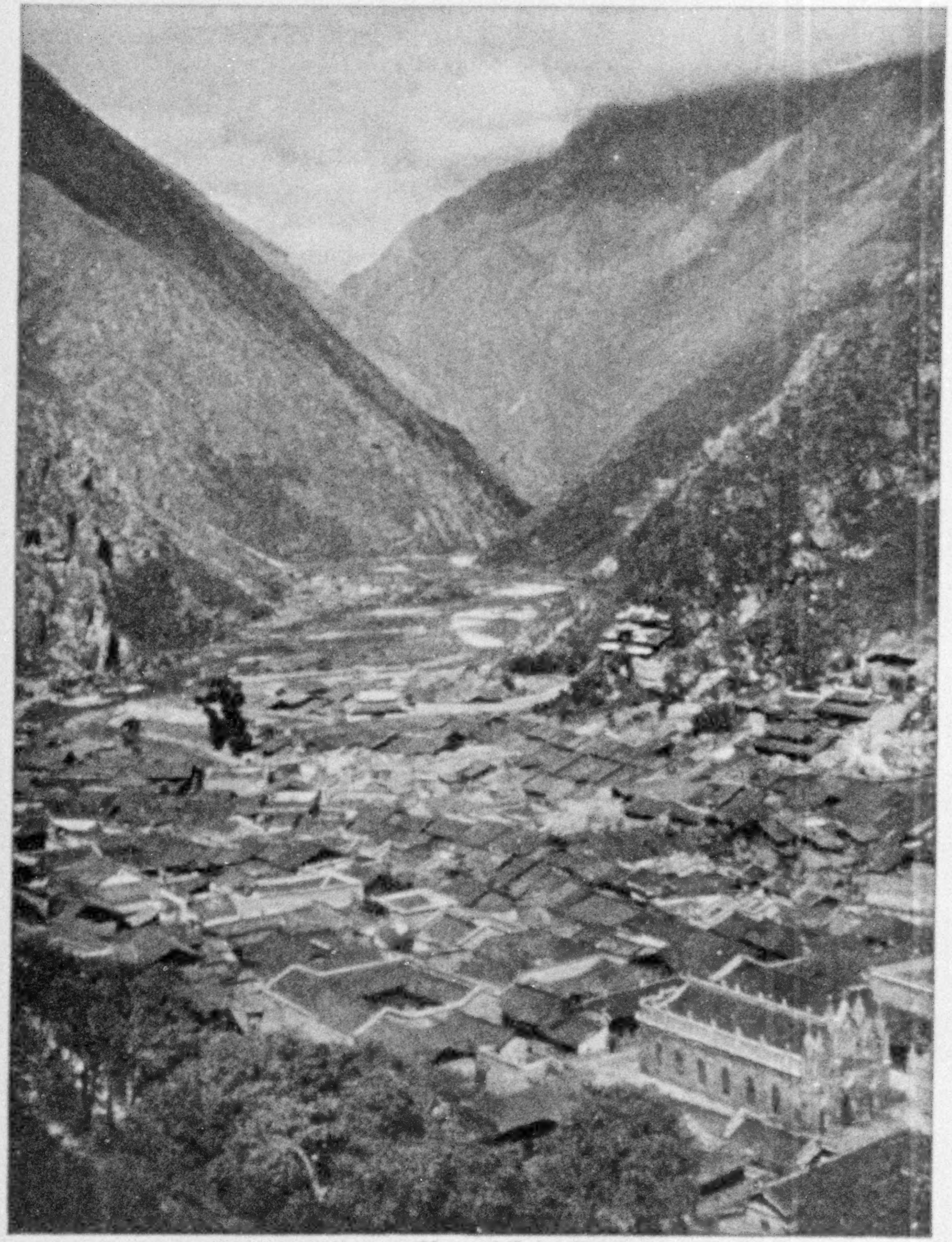
MUTIRONG VILLAGE NESTLES ON A TERRACE IN THE YALUNG GORGE

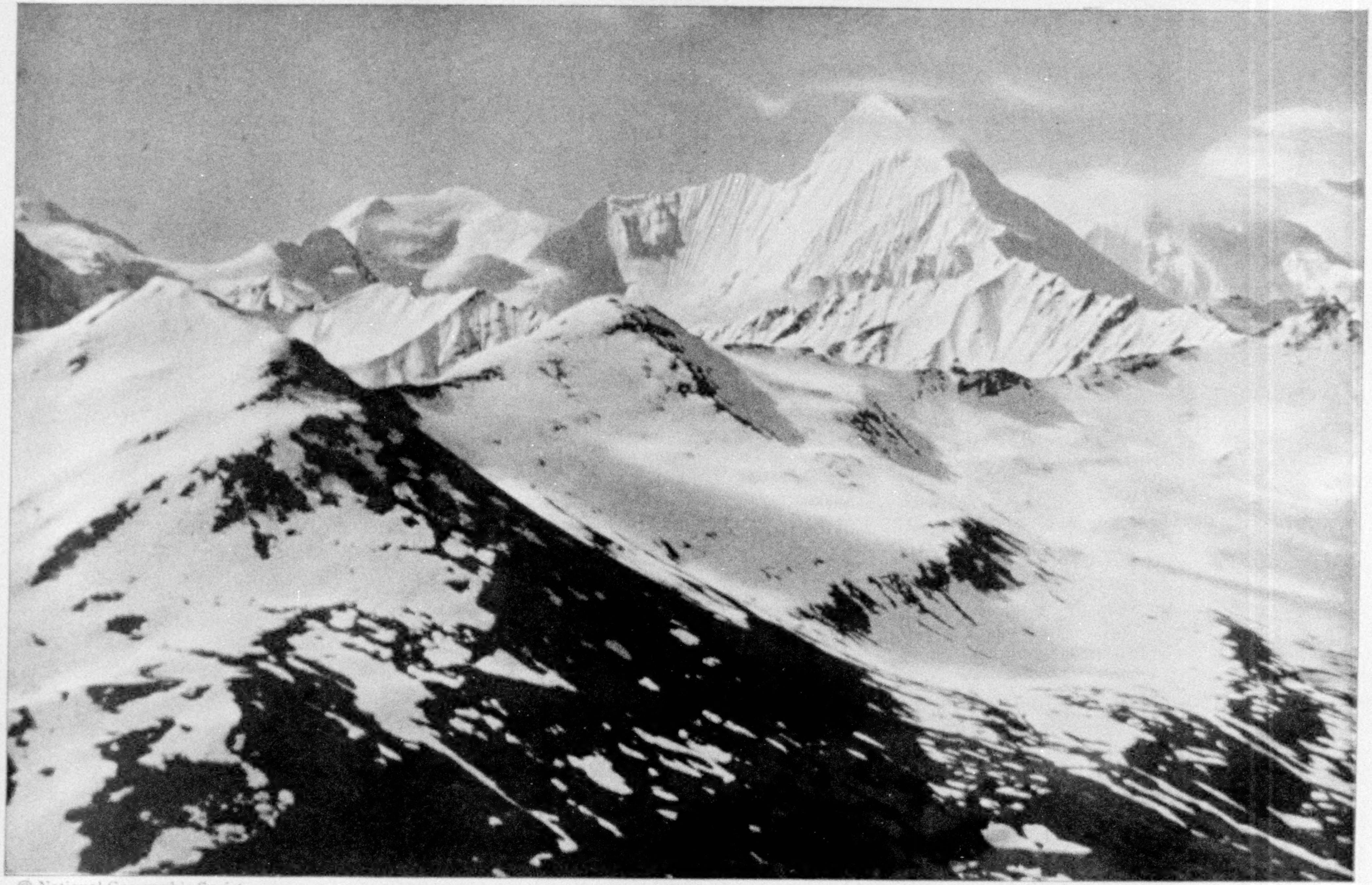
The National Geographic Society's expedition is indebted to the natives of this hamlet who, in shifts, struggled for a whole day to transfer the party's belongings across the Yalung River.



Natural-Color Photographs by Joseph F. Rock

TATSIENLU, AT THE CROSSROADS OF TWO IMPORTANT TIBETAN TRADE ROUTES

Commerce has brought to this town in Kham territory a population of 20,000. In the lower right corner is one of the most imposing Christian churches in this part of the world.



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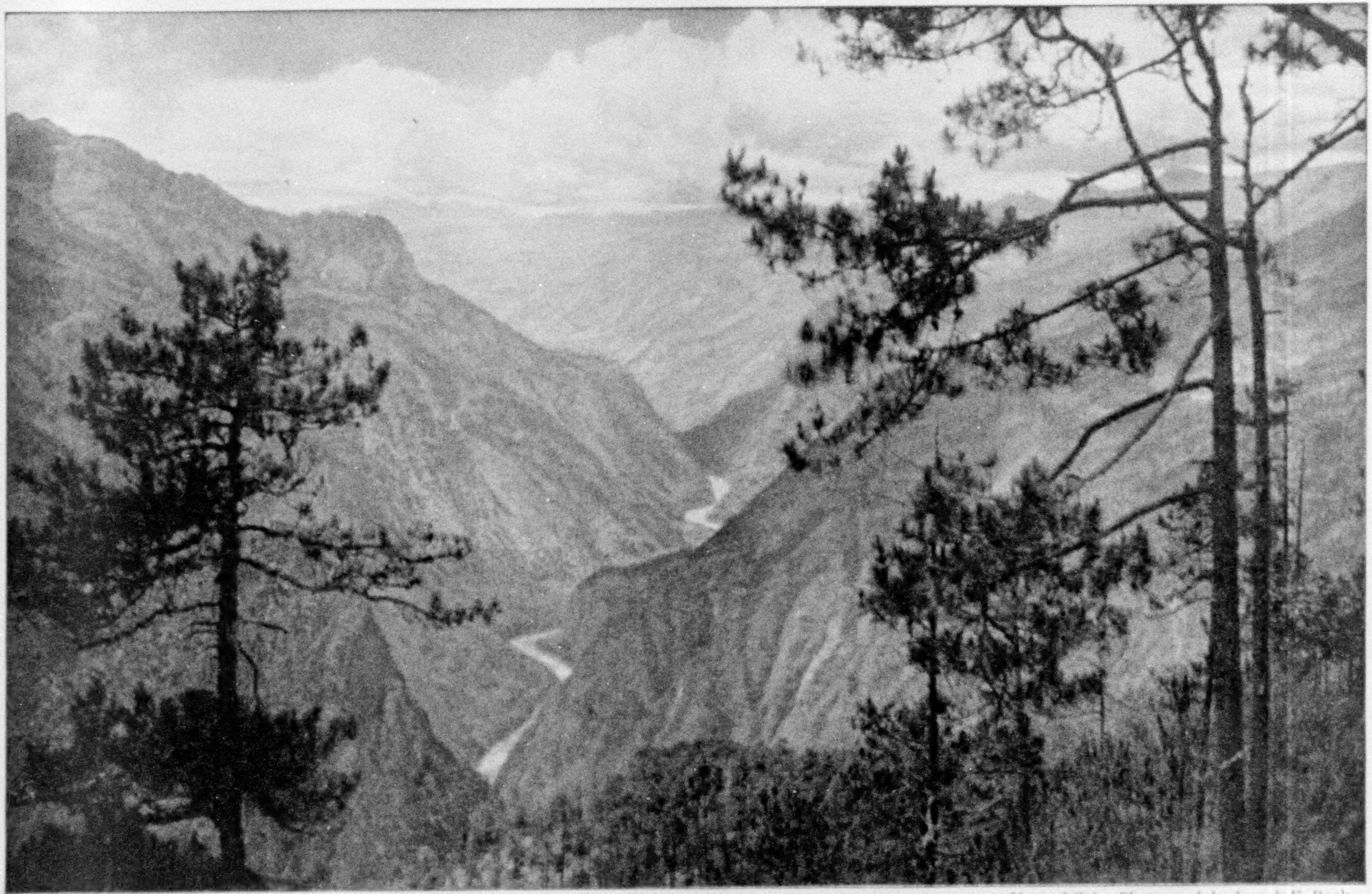
Natural-Color Photograph by Joseph F. Rock

NATURE AND MAN HAVE JOINED FORCES TO MAKE THESE MATCHLESS PEAKS INACCESSIBLE

Forty-five days from the nearest railhead, in a region infested with bandits, the peaks of the Minya Konka Range reveal their grandeur only to those adventurous spirits who are willing to face the dangers, endure the hardships and meet the expenses of a long, tedious and difficult journey. This view, taken from an elevation of 16,600 feet, shows the 23,000-foot giant Reddomain Solo, most northerly peak of the Minya Konka Range.



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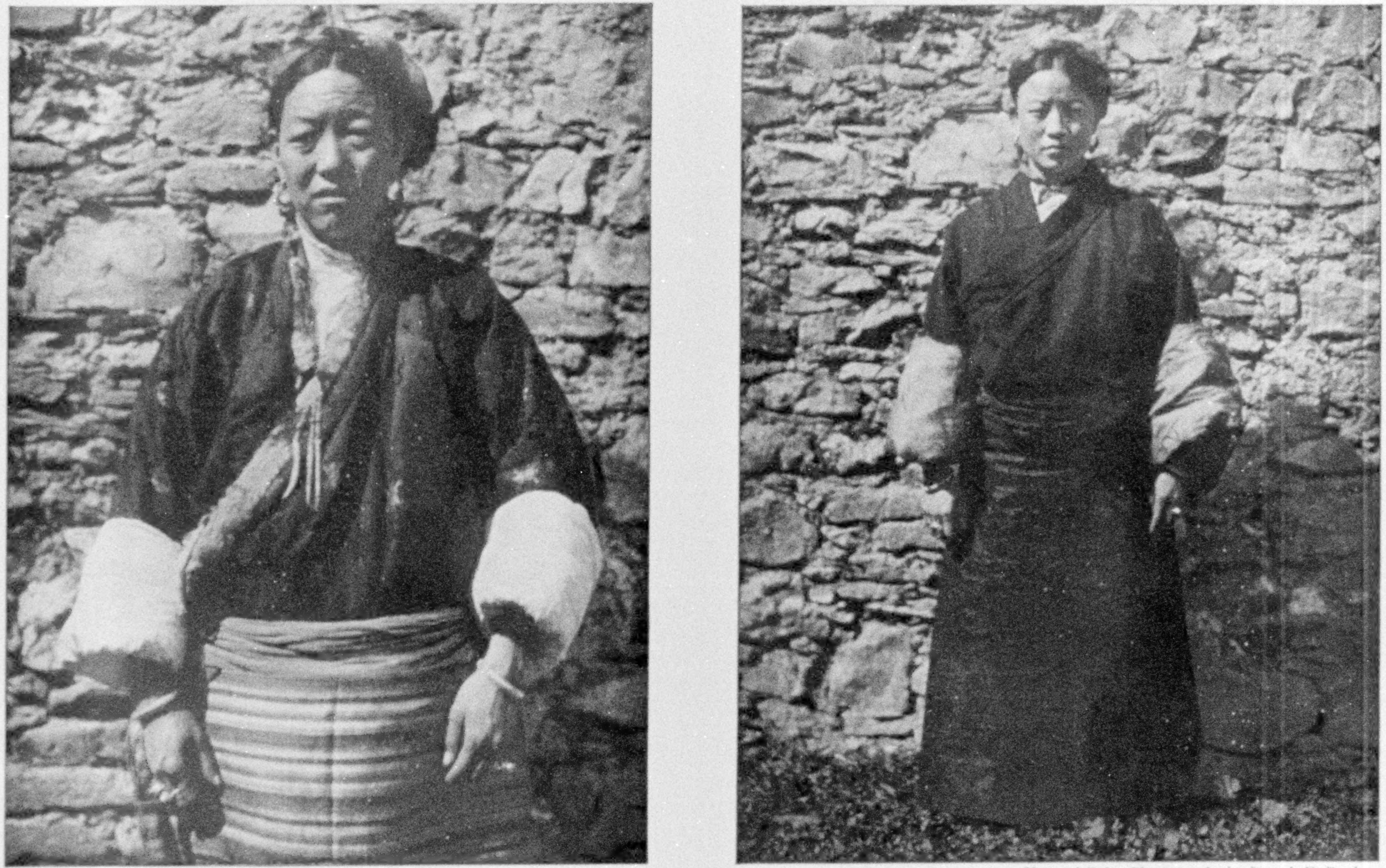
THE AWESOME GORGE OF THE YALUNG RIVER IS UNSURPASSED IN WILD AND RUGGED GRANDEUR

After the completion of the Minya Konka journey, the National Geographic Society expedition explored the course of this river where it forms the border between Muli and Kwapieh territory, near its junction with the Litang. Dr. Rock was one of the first white men to travel through parts of this wild country.



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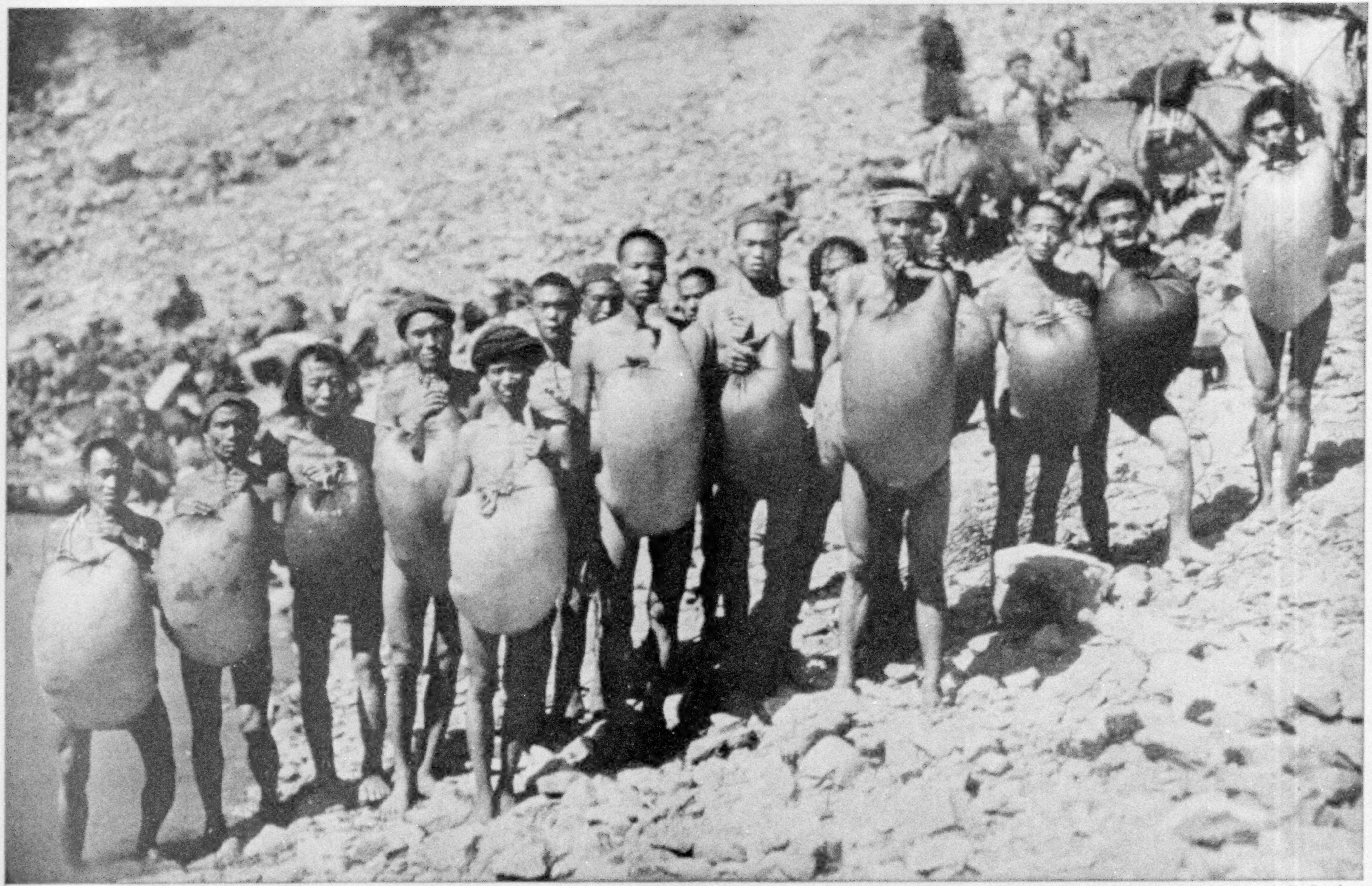
TIBETAN WOMEN ENJOY A FREEDOM UNUSUAL TO THEIR SEX IN ASIA

Although untouched by the trend of modern times, they do not live the secluded life decreed for so many of their sisters of the Far East. They take an active part in trade and business, are strong, intelligent and often masterful enough to be the actual heads of their families. These women, from Draya (left) and Chwanpien, are in festive attire.



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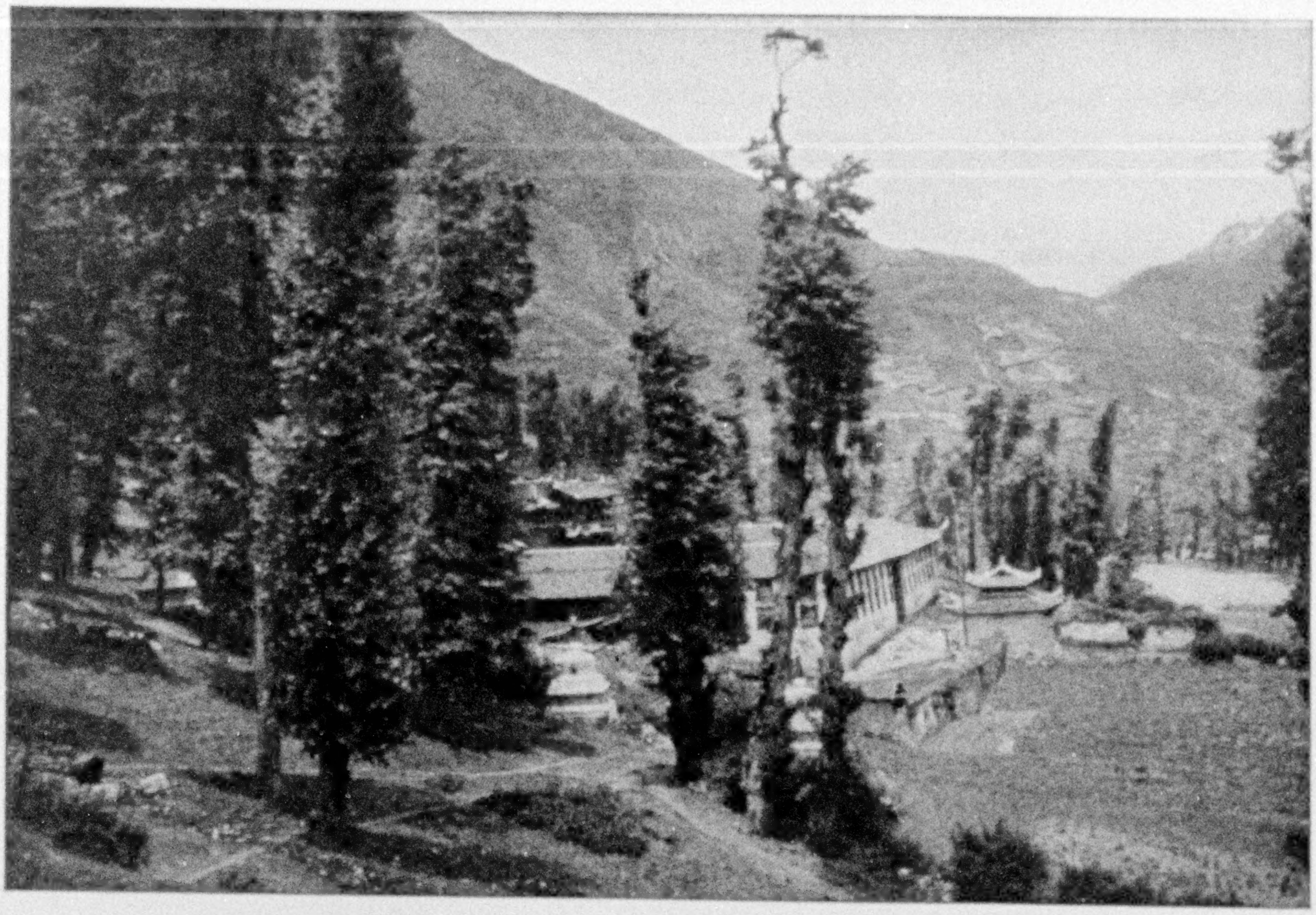
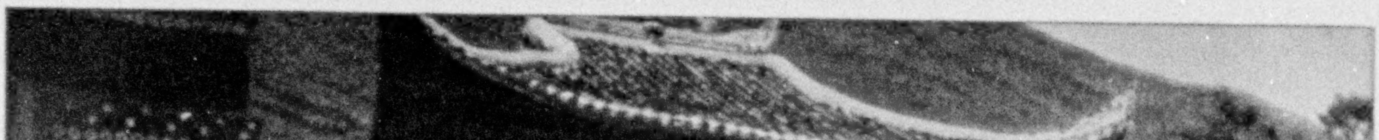
SHUHIN TRIBESMEN READY TO FERRY THE EXPEDITION ACROSS THE YANGTZE

Civil war in northwestern Yünnan caused the National Geographic Society's party considerable inconvenience. Belligerents destroyed all ferries across the river and Dr. Rock and his followers were unable to leave the war-ridden area until these Shuhin tribesmen, equipped with inflated goatskins, agreed to take them across the Yangtze. The crossing, although attended by many difficulties and numerous thrills, was at last safely negotiated.



THUNDERBOLT MONASTERY, A STRONGHOLD OF THE RED LAMAS NEAR TATSIENLU (SEE COLOR PLATE XI)



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PRAYER FLAGS ADORN A SHRINE OF THE YELLOW SECT

Lamaism is a form of Buddhism, practiced in Tibet and Mongolia. There are several sects among which the red lamas and yellow lamas are numerous. This lamasery is in the vicinity of Tatsienlu. The ovenlike structure in the foreground is for burning juniper boughs as offerings to the deity before whose shrine it stands.

with the history of the monastery and Minya Konka. In reality, as I later learned, it represented mainly a eulogy to Dordjelutru. It declared that there is no more beautiful spot on earth than Minya Konka, and that one night spent on the mountain is equivalent to sitting ten years in meditation in one's house and praying constantly; that one offering of burning juniper boughs is equivalent to hundreds of thousands of prayers.

According to the inscription, Padma Sambhava, the Indian teacher and founder of the red lama sect, pronounced Dordjelutru equivalent to Shenrezig (Chenresi), the Avalokitesvara of India, and of the same origin; also, all the tutelary deities of the lama church dwell within this sacred mountain, and anyone gazing upon the peak will have all his past sins wiped off the slate, so that he may begin life anew! At the end a warning is given to the effect that anyone not believing this is a wicked being and a heretic. The closing lines are incantations to the mountain god (see illustration, page 414).

Our explorations of Minya Konka completed, we turned again southward with our collection of negatives and color plates, but by a different route, via Wushi and Baurong, leading through still more wonderful forests of fir, spruce, and birch.

Baurong, a Hsifan hamlet, on the eastern banks of the Yalung, is a mass of ruins. The people are poor, as their houses have been burned and looted by the Konkaling bandits, who use the Muli king's roads to cross the Yalung, and then loot and murder without mercy. It was at Baurong that the living buddha of the Konka Monastery once met Drashetsongpen, with his horde of outlaws, and was robbed of everything, even to the very clothes he wore.

At Gendshü, a hamlet on a high terrace west of the Yalung and in Muli country, the peasants told me that once Drashetsongpen and his men swooped down on them, and all the village people fled into the mountains, abandoning their homes. When they learned that the bandits were crossing the Yalung to Baurong they returned to their homes, finding to their relief that the outlaws had left everything untouched, having stolen only firewood to boil tea! But Baurong, in Chinese territory opposite, was burning and the peasants there had been robbed of all their effects and live stock. The bandits had not molested the Gendshü peasants because they were subjects of the Muli king, with whom the outlaws were on friendly terms.

### A NEW ROPE BRIDGE STRETCHED FOR THE EXPEDITION

At Baurong the Yalung was a fierce torrent of considerable width. It had to be crossed by means of a single rope bridge. Our caravan was very formidable, the loads and animals being unusually heavy. The Hsifan peasants decided to make a new rope and stretch it across the river to strengthen the bridge. A native attached himself to a wooden slider and pulled himself slowly across, dragging the new rope after him; then he lashed it to the old rope with willow loops.

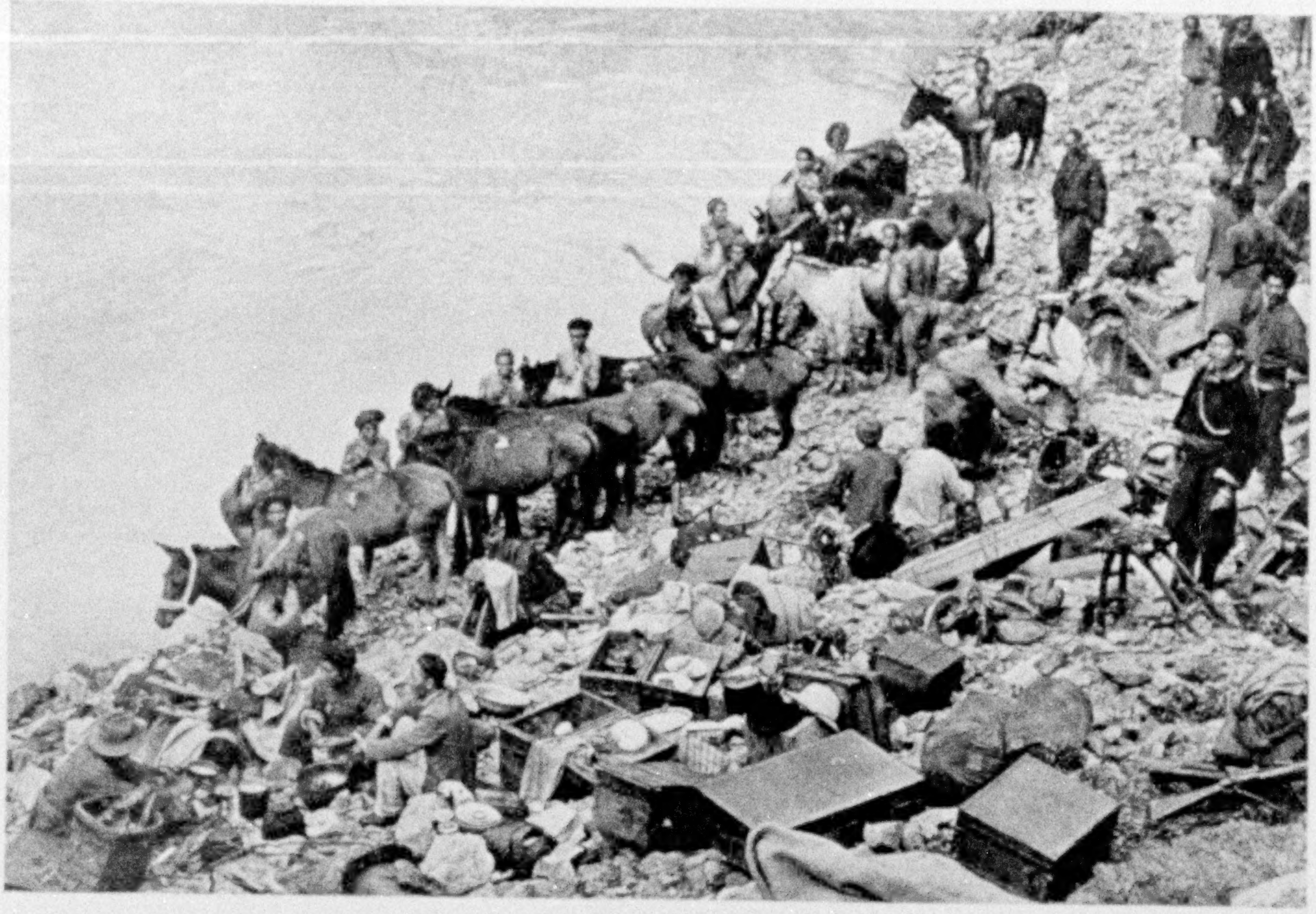
It took us two days to negotiate this crossing over the Yalung. The "bridge" itself was merely a rope of twisted canestalks, along which every man, animal, and load had to be passed on a sort of oak sled, like an aërial tramway. We lost two mules here when the sled split in the center and left the animals suspended over the middle of the stream bed. The only way to free an animal thus suspended and at the same time clear the rope bridge is for one man to crawl out and cut the leather straps to which it is fastened. This lets the mule fall, kicking and splashing, only to disappear very soon in the surging waters of the Yalung.

To cross the river after observing such a spectacle is a bit disconcerting, but our proverbial luck was with us and we arrived on the other side in safety.

### SURROUNDED BY KONKALING BANDITS

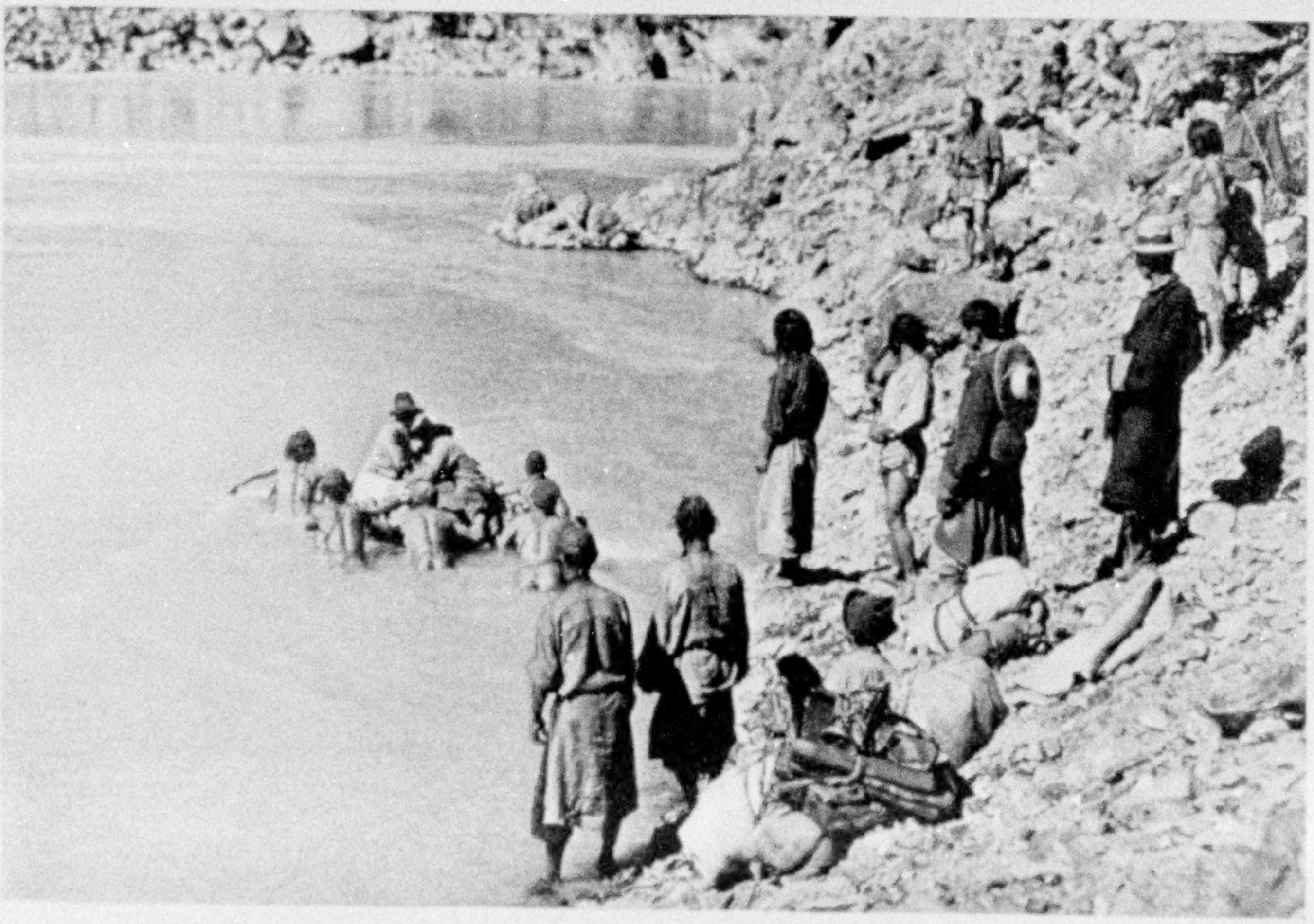
After a peaceful journey back to Kulu, our starting point, I said farewell to our friendly lama king who had aided us so nobly. His parting wish was for me to come again, and then to be sure to bring him "a machine which would make everything."

There remained only the short three days' journey to Youngning. When I reached this town I learned to my consternation that the ferries across the Yangtze had been smashed, and that it would be impossible for us to continue to our



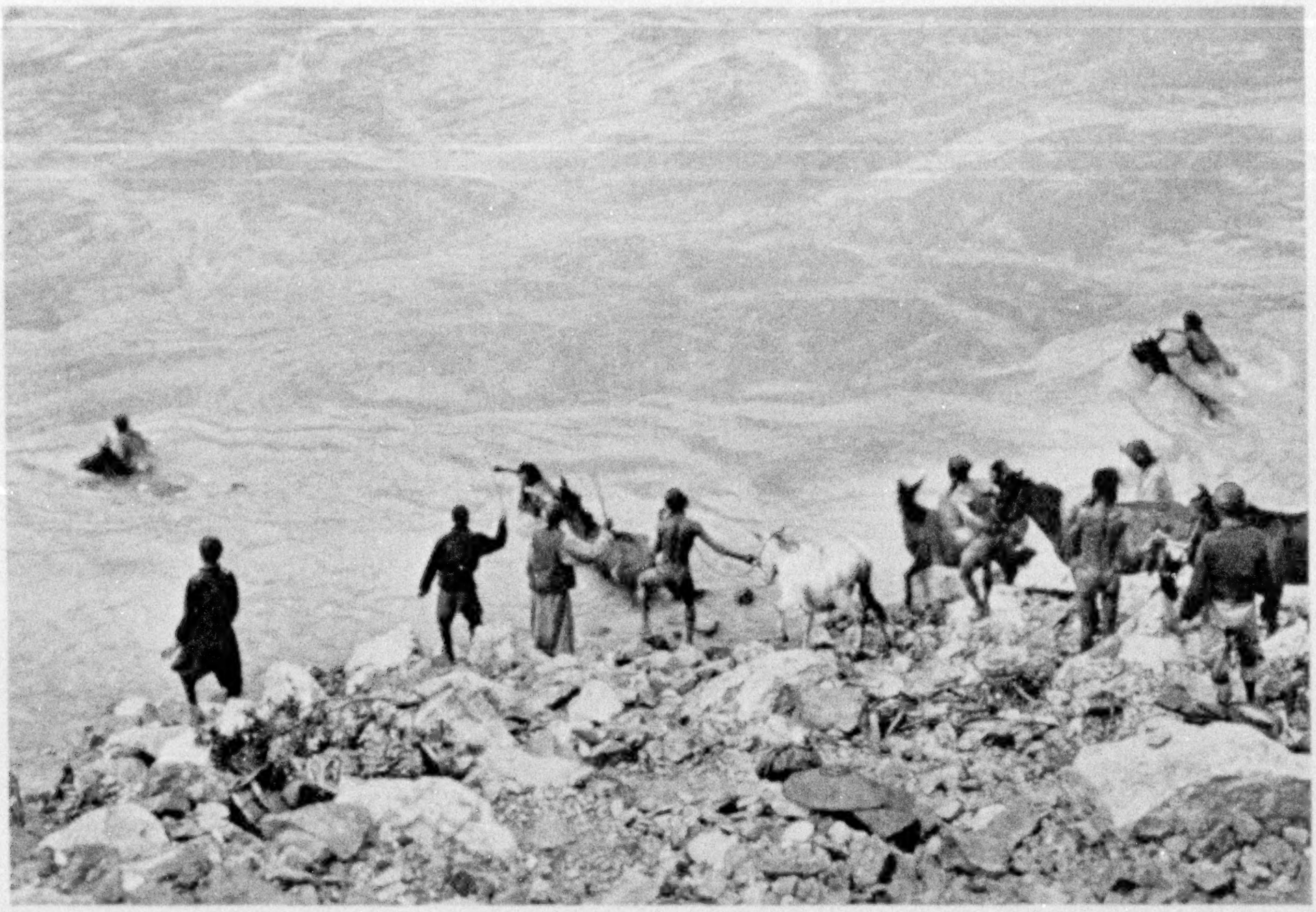
THE EXPEDITION ASSEMBLED ON THE STEEP BANKS OF THE YANGTZE

Because of civil war between two military factions of Yünnan, the ferries across the Yangtze were smashed to prevent either from crossing; hence the expedition crossed on skin rafts improvised for the purpose.



CROSSING THE YANGTZE ON GOATSKIN RAFTS

Three men would push and paddle with their feet, while two in front would pull. Striking a whirlpool, just off the point in the middle background where it met the main stream, the raft would spin like a top, but soon would speed on again with the current.



THE EXPEDITION'S ANIMALS STRUGGLING IN THE SWIFT YANGTZE CURRENT

While the men of the party, their supplies and equipment, were taken over on inflated goatskin rafts (see illustration on opposite page), the horses were taken across one by one in charge of a native, with a goatskin life-preserver tied to his waist. Occasionally both man and beast would disappear in a whirlpool; then both would pop up again like corks.

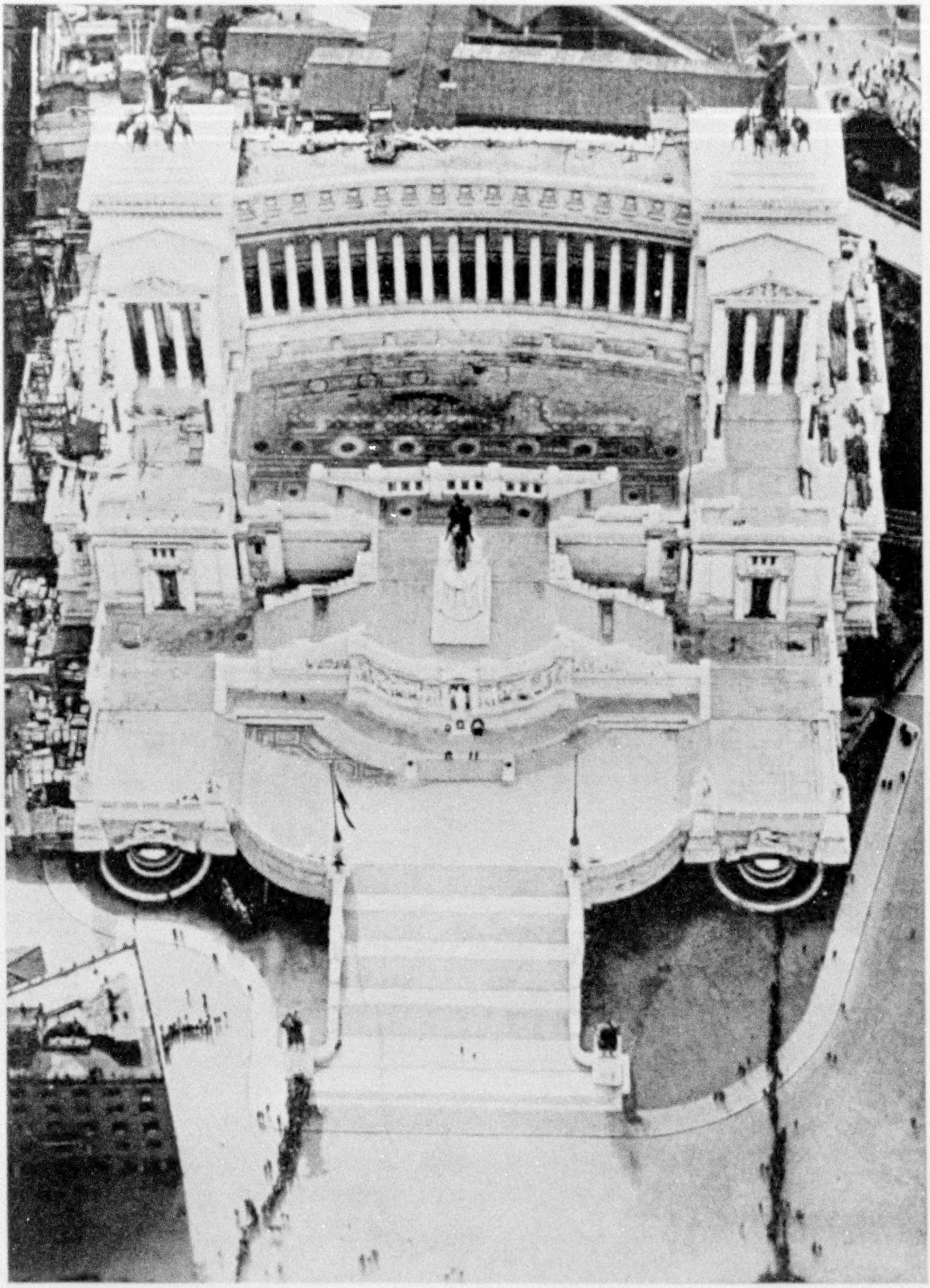
Nashi village of Ngulukö, on the Likiang snow range. The reason given was that 8,000 rebels, who had planned to take the capital of Yünnan, had been driven west and now occupied Youngning territory. So for two months I remained marooned on an island in the Youngning Lake, threatened by the Konkaling bandits from the northwest and the rebel forces from the south. It was a precarious situation.

### ESCAPE IS EFFECTED ON INFLATED GOATSKINS

When threatening letters arrived and 2,000 of the rebels came within 40 miles of Youngning proper, I decided that it was high time to leave. I did not care to be held prisoner while rebels dickered with government troops over my release, and then risk losing my head should terms be rejected! I brought pressure to bear on an old chief of Mongol ancestry, who claimed direct descent from Kublai Khan. I urged him to help us across the Yangtze.

The gallant old gentleman sent for all his best swimmers, 22 in number. With their help and about 150 inflated goatskins, we managed to cross the terrific torrent of the Yangtze to the Likiang side, landing at an unfrequented place with the loss of only one mule (see Color Plate XV).

Once more our guardian angel was with us and brought us safely back, with the lesson that all things worth while are difficult of attainment.



Photograph by Herbert

A COLOSSAL MONUMENT TO THE UNITY FOR WHICH VERGIL PLEADED 2,000 YEARS AGO

At the base of this great edifice to the memory of King Victor Emmanuel II, under whom Italy was united, is the grave of an Unknown Warrior, one patriot who stands for all those who gave their lives for Italy during the World War.

# THE PERENNIAL GEOGRAPHER

## After 2,000 Years Vergil Is Still the Most Widely Read of Latin Poets—First to Popularize the Geography of the Roman Empire

By W. Coleman Nevils, S. J., D. D., Ph. D.

*President, Georgetown University*

ONE of our younger poets has lately given us a delightful picture of Methuselah and his lady wife sitting by the shore on a mild moonlight night after nine hundred years of happy married life; the lady is musing upon those early centuries when her spouse was a mere lad of a hundred and twenty years, and she a débutante of one hundred and ten! Perhaps, if the greatest of Latin poets, Publius Vergilius Maro, were to return to earth and join in our world-wide celebration of his two-thousandth birthday, October 15, 1930, he, too, would look complacently upon those early centuries when he was only a thousand or fifteen hundred years old.

And were he to travel in England and visit classic halls at Cambridge and Oxford, or wander through the learned universities of the Continent and the Americas, he would find that, as far as birthday celebrations go, he is as young as ever and just as revered as in the days of the Roman Empire; moreover, his admirers have grown from thousands to tens of thousands. Commemorative exercises of the bimillenary of his birth are being held the world over; great festivals have been inaugurated for the summer and autumn; Vergilian tours and cruises have been widely heralded; great libraries have exhibits of priceless tomes and relics; it would seem that no author, ancient or modern, has ever received so universal a celebration.

This is, of course, highly gratifying and most encouraging to the old-time professors of classics and to schools and colleges that have all along held to Latin as a requirement for the Arts degree.

This year 1930 has been hailed as a season of pilgrimage; off to Mantua, to Cremona, to Rome, and to Naples many are flocking to pay homage to one who has ruled almost continuously for two thousand years in classic halls. A certain sacredness attaches to those spots where Vergil was born, was reared, studied and wrote. Even places that he may not have seen, but has written of in his immortal verses, are honored as never before. Troy and Carthage and Crete and Ithaca, all find themselves bedecked with a new attractiveness, because Vergil has sung their praises.

It is interesting to note that these pilgrimages and celebrations of a birthday are quite in keeping with an old pagan custom among the Romans; it was their wont to attach a certain sacredness to their own birthdays and to those of their great men. But the birthday of Vergil, the Ides of October, not only during his own life, but for centuries after, has enjoyed a very special fame and a sanctity akin to that of a day of religious or national festival.

### THE SON OF A PROSPEROUS FARMER

It was seventy years before the Christian era on October 15 that a prosperous yeoman farmer in the commune of the Andes was presented by his wife, Magia Polla, an heiress, his employer's daughter, with a little boy who was destined to be one of those rare creatures, a poet born, not made. Of the mother we know very little beyond her name; the father spent his working days in forestry and in beekeeping, a simple man, but one who knew how to rear a son to classic fame.

The commune of Andes was in territory attached to Mantua; tradition has identified it with Pietole, which is three miles to the southeast of Mantua, on the banks of the Mincio.

The boy was sent to school first at Cremona, and then to the larger and better-equipped schools at Milan, and finally, at the age of eighteen, to Rome, that in the metropolis he might enjoy the tutelage of the great masters in literature and oratory.

Photograph by Luigi Pellerano

TRADITIONAL SITE OF VERGIL'S FARM AT ANDES

Pietole, asserting that it is the Andes of ancient times, has its monument to the Mantuan poet. Dante referred to Vergil as "that noble spirit for whose sake Pietole is more renowned than any other hamlet in the Mantua region." The Mincio (left) is the outlet for Lake Garda.

Some say that here Julius Cæsar's grandnephew and adopted heir, Octavius, the future Emperor Augustus, was one of his schoolmates.

His course embraced the language and literature of Rome, with special emphasis upon the Latin orators; of course, Greek philosophy was studied. Vergil was an ardent student and must have enjoyed the circle of kindred spirits in the brilliant group of young littérateurs who later became his intimate friends and formed with him the outstanding intellectual lights of the Augustan period, one of the greatest in the history of letters, and surely the most splendid in Roman literature.

Vergil was naturally shy and reticent; he never fully recovered from the surroundings of early life, and possessed to the end a rusticity of manner. An asthmatic tendency, added to general physical delicacy, stood in his way of pursuing the usual roads to distinction and eminence among the Romans, the army or politics. He was temperamentally and physically unfit for the struggles of the field and the forum. Reading and study were his delight, and rural pursuits were congenial by inheritance as well as by taste.

His patrimony was sufficient to allow him to live the life of a scholar. He was fortunate, too, to find himself in his prime during times when civil strife was over, and prince and people were intent on procuring peace.

After the victory at Philippi, the triumvirs had not only to demobilize their vast armies, but upon their return to Italy to arrange some settlement for them. As certain Italian districts had taken arms against them, it seemed well to confiscate their lands and give them over to the returning soldiery. The territory around Mantua was among the unfortunate ones, and with it went Vergil's inheritance. However, his influential friends at court intervened and a compensation was effected whereby a small landed estate near Nola, in Campania, was made over to him and at the same time Vergil was introduced to those leaders at Rome who were gradually forming the great Imperial

Photograph by Wilhelm Tobien

WATER FROM LAKE GARDA FLOWS PAST VERGIL'S BIRTHPLACE

The Lacus Benacus of the Romans, about 32 miles long and 10½ miles wide, is the largest and most picturesque of the upper Italian lakes. The climate is mild and the fishing is excellent, Lake Garda trout sometimes weighing 25 pounds (see, also, text, page 450).

Court that was to become so famous for all times in the peaceful arts.

From then on prosperity smiled upon the Mantuan poet, and he never had to fear poverty or lack of influential friends; for his future was quite secure. His gratitude has been expressed in his first published work, entitled "Eclogues," or Selections; they are sometimes called "Bucolics" from the pastoral themes that predominate. The promise given by these poems won him fame and already he was looked upon as "poet laureate."

### THE GREAT MÆCENAS BECOMES HIS PATRON

In those days, around 37 B. C., there was at Rome a man of remarkable magnetism and skill, Caius Cilnius Mæcenas. He possessed in an eminent degree a talent for private diplomacy and for many years remained the chief adviser and friend of Octavius. When the latter became Emperor, under the title of Augustus Cæsar, he appointed Mæcenas administrator of all Italy; in fact, it is well established that Mæcenas, seeing the need of a strong government to repress the dire anarchic tendencies of the period, urged Octavius to take supreme control and establish an imperial government.

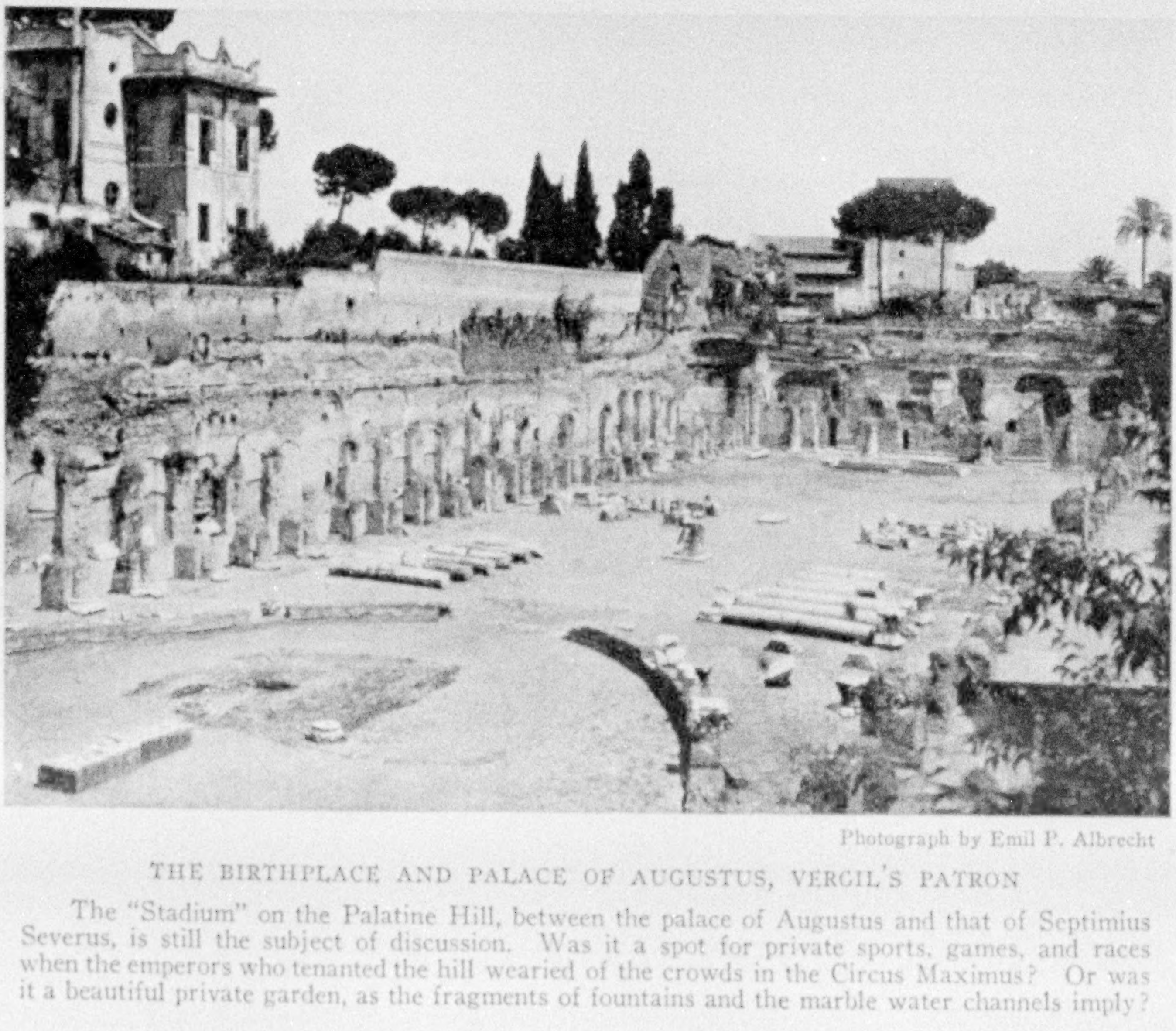
Mæcenas, while he enjoyed the full confidence of the powers at Rome, set about solving the difficult problems of reconstruction, not only in purely civil matters, but in the fine arts as well. He is mainly celebrated as a patron of letters. His name has been attached to the pleasure ground, "the Gardens of Mæcenas," he established on the Esquiline Hill, where the infamous Nero had his grand palace, and in tradition is said to have sung to his lyre during the burning of Rome.

Mæcenas was a man of great wealth and was munificent in his encouragement of aspirants in the several arts. He was no mere dilettante, but had a genuine appreciation, especially of literature; he always kept in view the highest interests of the state. He saw, too, that Rome had been emancipated from the complete control

Photograph by Melville Chater

A SELLER OF POMEGRANATES AND LEMONS ON A LAKE GARDA STEAMER

The large lemons are so mild that travelers eat them like apples. Steamers run several times a day from Riva to Desenzano in about four hours of unforgettable delight.



Photograph by Emil P. Albrecht

THE BIRTHPLACE AND PALACE OF AUGUSTUS, VERGIL'S PATRON

The "Stadium" on the Palatine Hill, between the palace of Augustus and that of Septimius Severus, is still the subject of discussion. Was it a spot for private sports, games, and races when the emperors who tenanted the hill wearied of the crowds in the Circus Maximus? Or was it a beautiful private garden, as the fragments of fountains and the marble water channels imply?

Photograph by Maynard Owen Williams

WOMEN OF MÉGARA, WHERE VERGIL FELL ILL (SEE TEXT, PAGE 456)

Although not far from Athens, Mégara still retains its local costume. The everyday dress is here shown in such a rustic setting as the author of the "Bucolics" would have loved. A much more elaborate style is worn in the Easter dance by the women of Mégara.

of the Greek masters and was ready to make a literature of her own. Besides, he felt that the poets would be not only an ornament to the Imperial Court, but that they could be used in creating a sympathy to the new order of things, especially if this could be idealized with a certain divine predestination.

He saw in Vergil a man after his own cherished plan; he could use him to glorify the land and the pursuits of agriculture and help inaugurate a "back to the farm" movement. Urged, then, with a truly patriotic object, Vergil wrote his most finished work, the "Georgics"—four books, giving a treatise on agriculture, which were published 29 B. C.

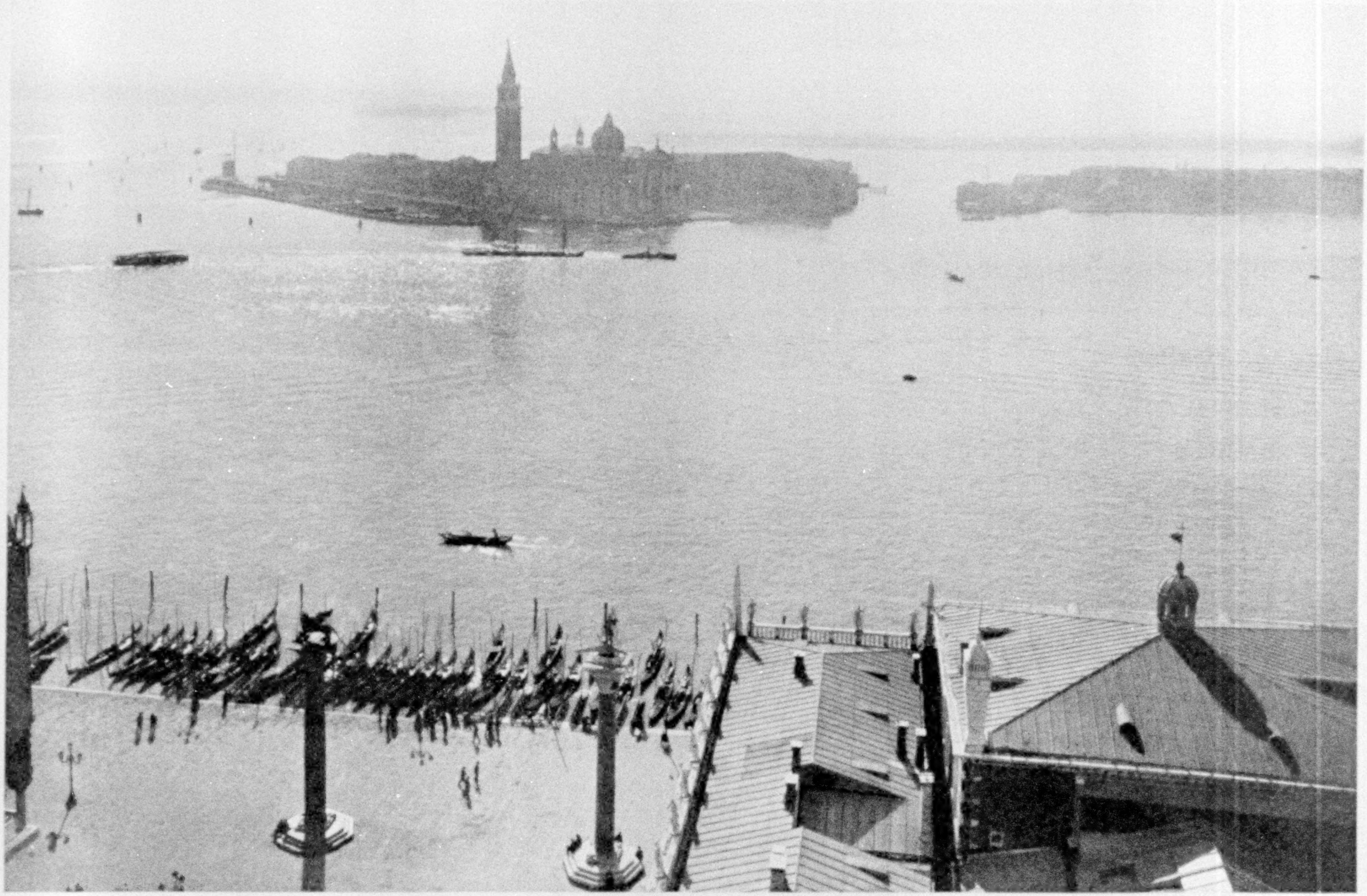
### VERGIL SANG THE PRAISE OF BEES 20 CENTURIES BEFORE MAETERLINCK

In a most attractive style and with highly colored language he imparts practical instructions on the best methods of land cultivation, of tree propagation, of horse and cattle breeding. The last book shows how the agriculturist may profit from a close study of the industry of bees.

Critics, ancient and modern, commend Vergil's accuracy in representing adequately ancient Italian agriculture and the unchanging phenomena of Nature; how the Romans tilled their soil and cultivated the vine and reared cattle and cared for horses. All through the work there is a sincere recognition of the dignity of labor; in fact, one might say Vergil would glorify labor as the great necessity of worldly well-being and the one thing necessary for the approval of the gods.

The old Romans were a most active race; their capacity for labor exerted itself in many fields, in war and in peace, in law and in literature, in the construction of roads, in the rearing of magnificent monuments, and, most of all, in the cultivation of the land.

Vergil sought to revive interest in the labors of a country life, to bring men back to rural industry, to cultivate the vine and the olive, to breed and rear sheep and cattle and horses, to till the land for the various crops that once were such plentiful gifts of the best of mother countries.



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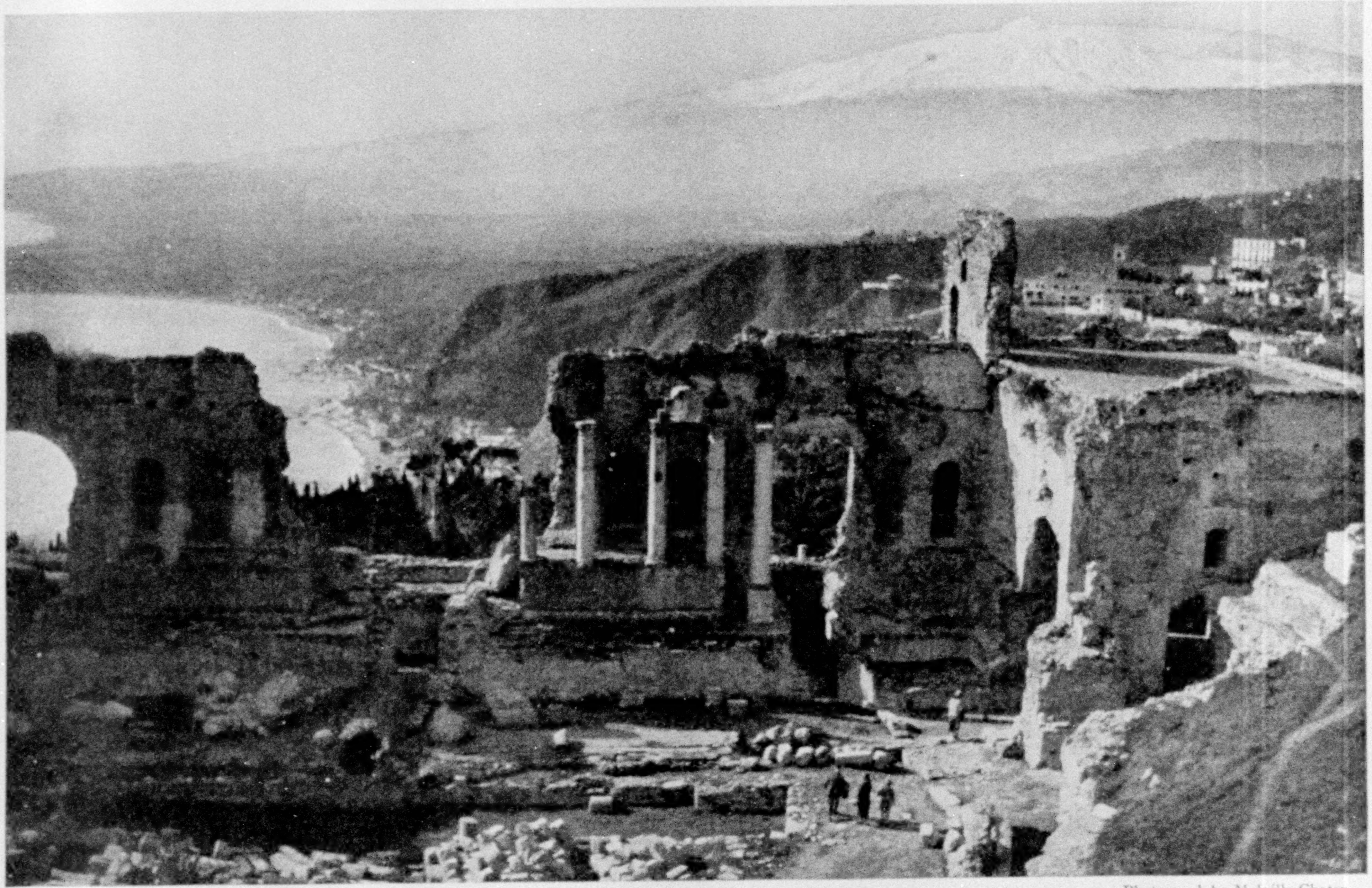
THE GRAND CANAL AND THE ISLAND OF ST. GEORGE, AT VENICE, AS SEEN FROM THE CAMPANILE

At the left is a corner of the Doge's Palace. Atop two granite columns are the winged Lion of St. Mark and St. Theodore, with the Campanile of St. Giorgio Maggiore beyond. The right foreground is occupied by the roof of the Old Library. The city's main gondola stand is seen at the foot of the Piazzetta.



Photograph by Melville Chater

SYMBOLIC OF THE GRECO-ROMAN CULTURE OF VERGIL'S DAY: THE THEATER AT TAORMINA, SICILY

To the Greek amphitheater the Romans, as in Athens itself, added a stage wall; but the real background is sea and sky and Europe's loftiest and most destructive volcano, Mount Etna, 10,758 feet high.

Photograph by Donald McLeish

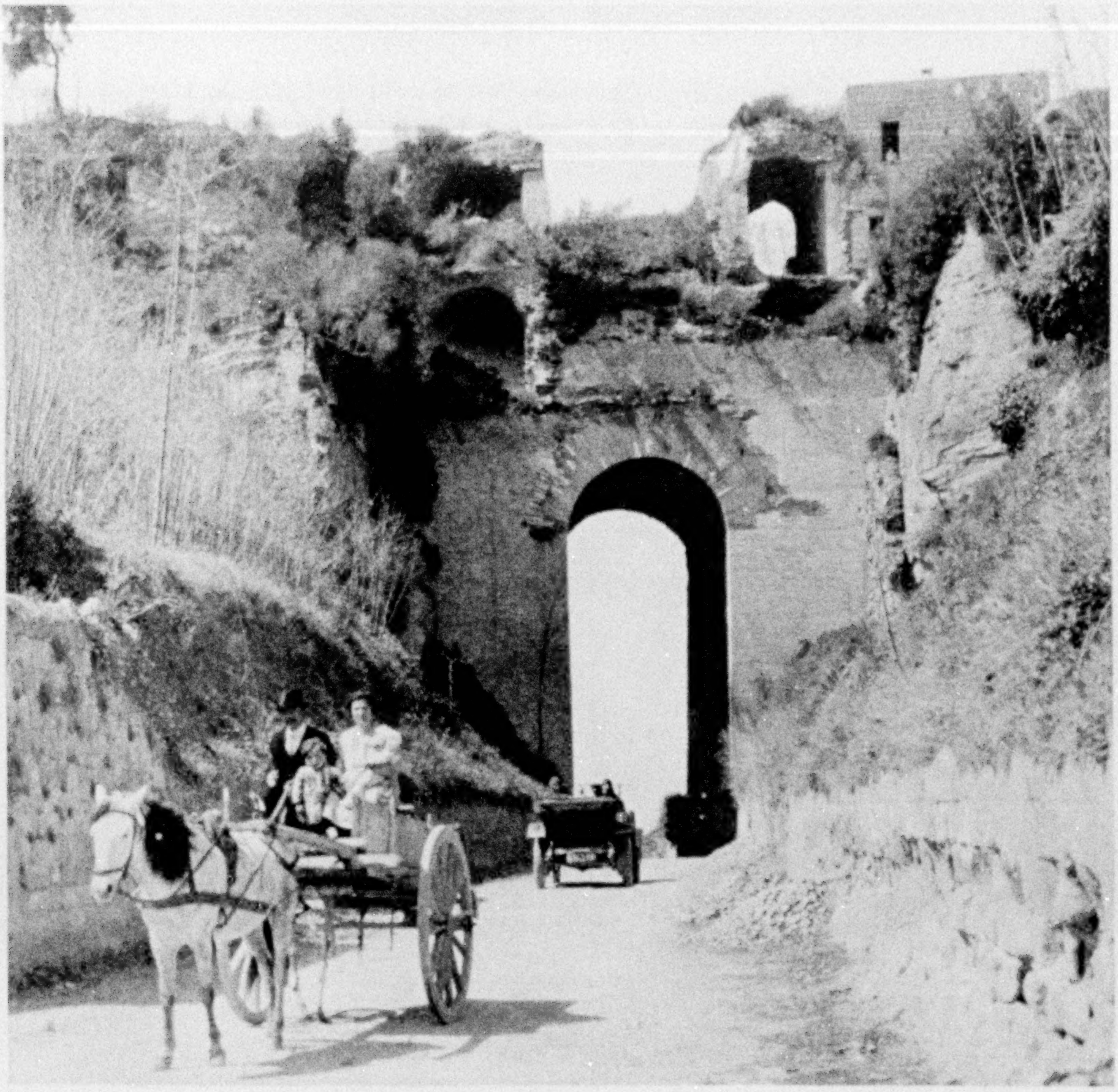
A FISHING BOAT ON LAKE COMO

As Lacus Larius and Lacus Benacus, the Italian lakes Como and Garda were beloved by the ancients as they are by the modern traveler (see text, page 450).

All through, Italy's superiority is stressed; other lands must yield to the ravishing beauty of its scenery, the incomparable fertility of its soil, the unsurpassed weather conditions. The spelt of Campania, the wheat of Apulia, the vine of Falernia, the oil of Venafrum, the honey of Calabria—what land produces these in such profusion? Well, too, might the Romans pride themselves on their herds of horses and cattle.

Rome, political and military, had conquered all races, but the time had come for Rome, peaceful and prosperous, to look to the foremost men of old and see how they loved to live on their own lands, and how they were rewarded for the enthusiasm and skill with which they improved their farms, and received the God-given largess of their fields.

Vergil appeals to a strong national interest in agriculture and to traditional associations. He is particularly happy, in that the matter of his writings seems to be drawn almost exclusively from personal observation, coupled with a sincere and patriotic appreciation of the homeland. Nor does he neglect the floral beauty—the twice-blooming roses of Pæstum; the ivy set with yellow jewels; the shore-loving myrtle; the curling acanthus and late-blooming narcissus, with white lilies here and there, verbena, and poppies (see illustration, page 458).



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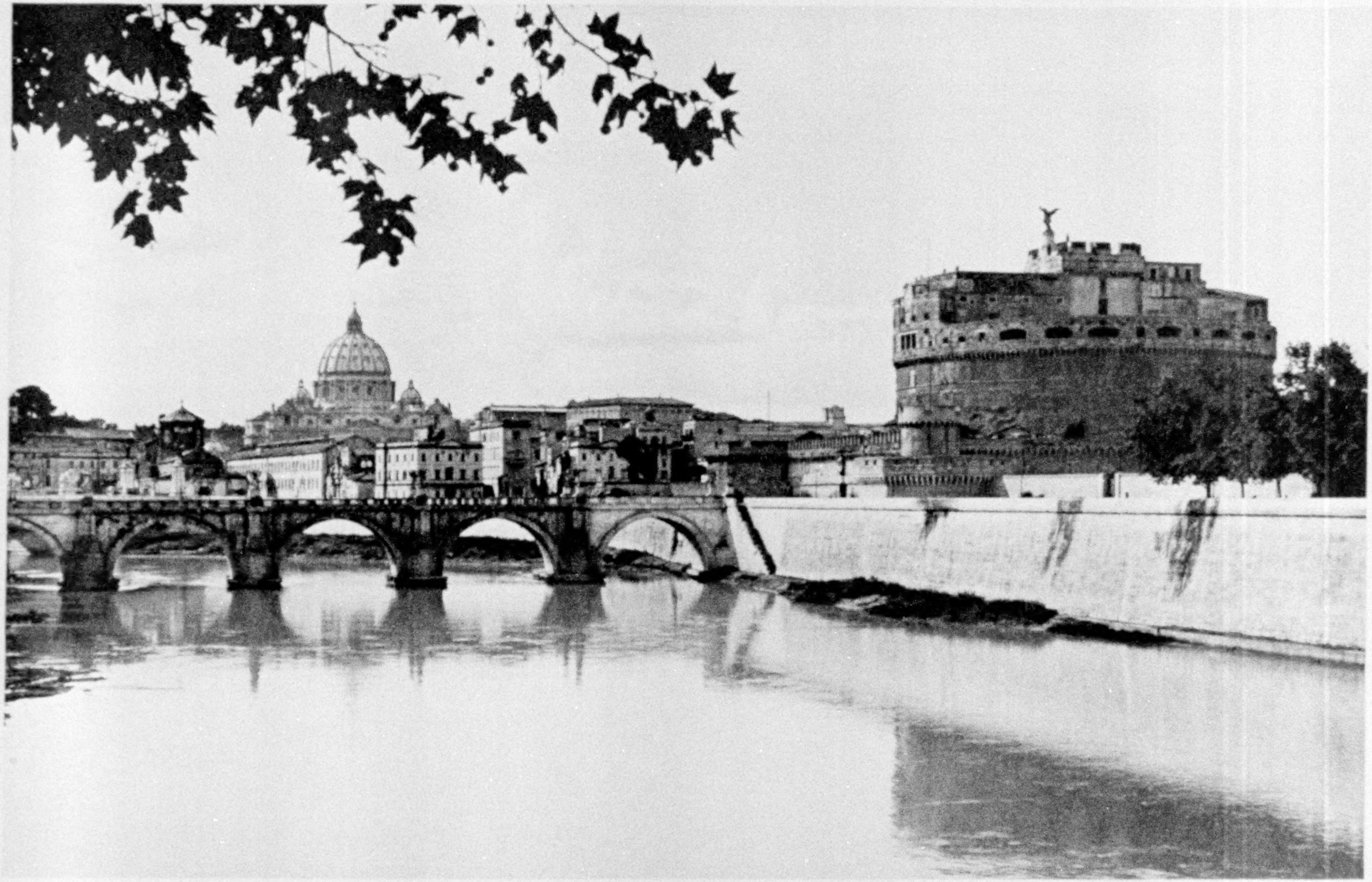
DOMITIAN'S ROAD FROM POZZUOLI TO CUMÆ PASSES UNDER THE ARCHWAY OF GOOD FORTUNE

This short cut through the tufa rock of the Phlegræan Fields runs from Italy's one-time commercial metropolis to the Hellenist settlement from which Pozzuoli and Naples itself developed. Near this spot Æneas descended to the infernal regions under the leadership of the Cumæan Sibyl, who spoke the famous lines: "The descent to Avernus is easy . . . but to retrace one's steps . . . there's the rub!"

Vergil may be regarded as Rome's most picturesque geographer. From his lines many more have remembered Italy's natural charms, scenic beauty, and rural possibilities than all the technical treatises and ever-multiplying guidebooks so lavishly supplied us. He was almost instinctively an interpreter of Nature; the meditative cast of his genius gave him insight into what for others were but natural commonplaces; from most ordinary and usual scenes he could extract elements of beauty, while to the commonest operations of industry and the hard, dull drudgery of rural labor he added a charm which is highly refreshing to any department of agriculture.

The farmer guiding the onward effort of his horses, steadying the plowshare as it cleaves the clay and forces fresh furrows, is a plain, prosaic thing, ill favored generally for its beauty or significance, but Vergil sees the scattered seed soon to be quickened into wholesome food for men who will bring peace and power and prosperity to the Empire.

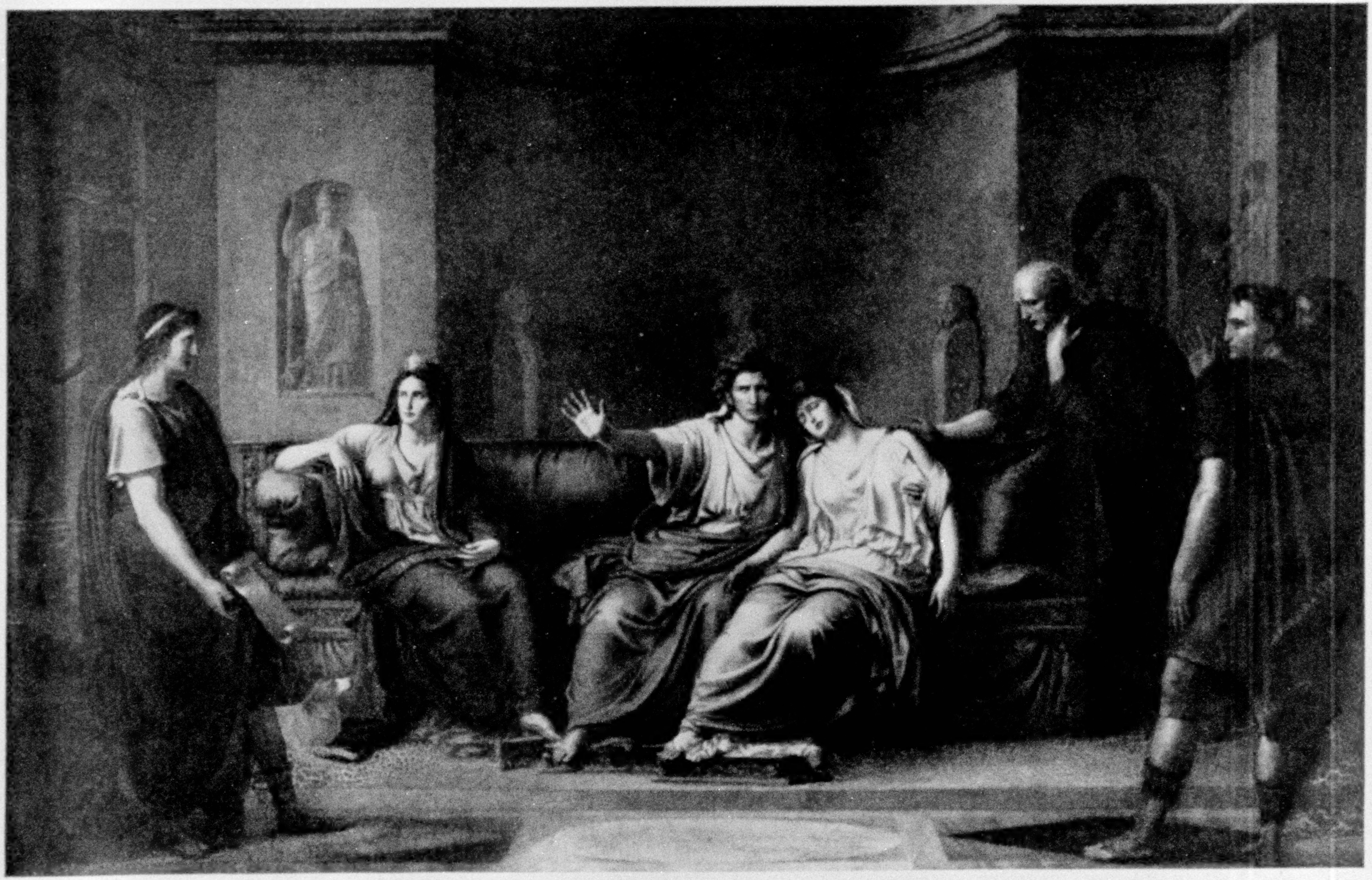


Photograph by Donald McLeish

THE ETERNAL CITY, SATIRIZED BY HORACE, EULOGIZED BY VERGIL

Neither St. Peter's nor the Castle of St. Angelo had broken the skyline of Rome in the Augustan Age, yet Vergil then panegyrized it as the city which "as far above all other cities rears her head, as cypress above pliant osier towers," and epitomized her destiny in his famous couplet:

"But Rome! 'Tis thine alone with awful sway
To rule mankind and make the world obey."



From a painting by Vikar.

Photograph by Italo Menozzi

OCTAVIA SWOONS AT VERGIL'S EULOGY OF HER SON

Ending his reading of the sixth book of the "Æneid" to Augustus and Octavia, Vergil eulogizes the youthful Marcellus, whose untimely death prevented him from succeeding to the throne. The mother, moved by the lines, has swooned and the Emperor signs to the poet laureate to cease (see, also, text, page 457).

INDRO
SIA 10

NEAPOLITAN DELIGHT: A HURDY-GURDY AND "O SOLE MIO"

Until "My Sunshine" and "Funiculi, Funicula" wear out, the exuberant Neapolitan will not lack for amusement or the street singers for a theme song.

It is in the second book of his "Georgics" that Vergil introduces with exquisite skill an episode of triumphant exultation in Italy's beauty of land. No district is omitted from the Tyrol to Apulia or Calabria; and all the fabled places of foreign lands are set in contrast that Rome's superiority may shine all the more. It is thus that he sings to the ages:

"But neither the groves of Media, that land of riches, nor fair Ganges, and Hermus, turbid with its golden silt, can vie with the glories of Italy; nor Bactra nor India and all Arabia Felix, wealthy in its incense-bearing sands.

"This region no bulls breathing flames from their nostrils have ever plowed for the sowing of teeth of a monstrous hydra, nor has the cornfield bristled with crowded helms and spears of men; but teeming crops abound; and the juice of the Massic vine with olive trees and goodly herds; hence comes the warrior horse that proudly bounds into the plain; oft have thy snowy flocks, Clitumnus, and the bull, the noblest victim of them all, bathed in thy hallowed stream, and have hence led to the shrines of the gods the triumphant Romans.

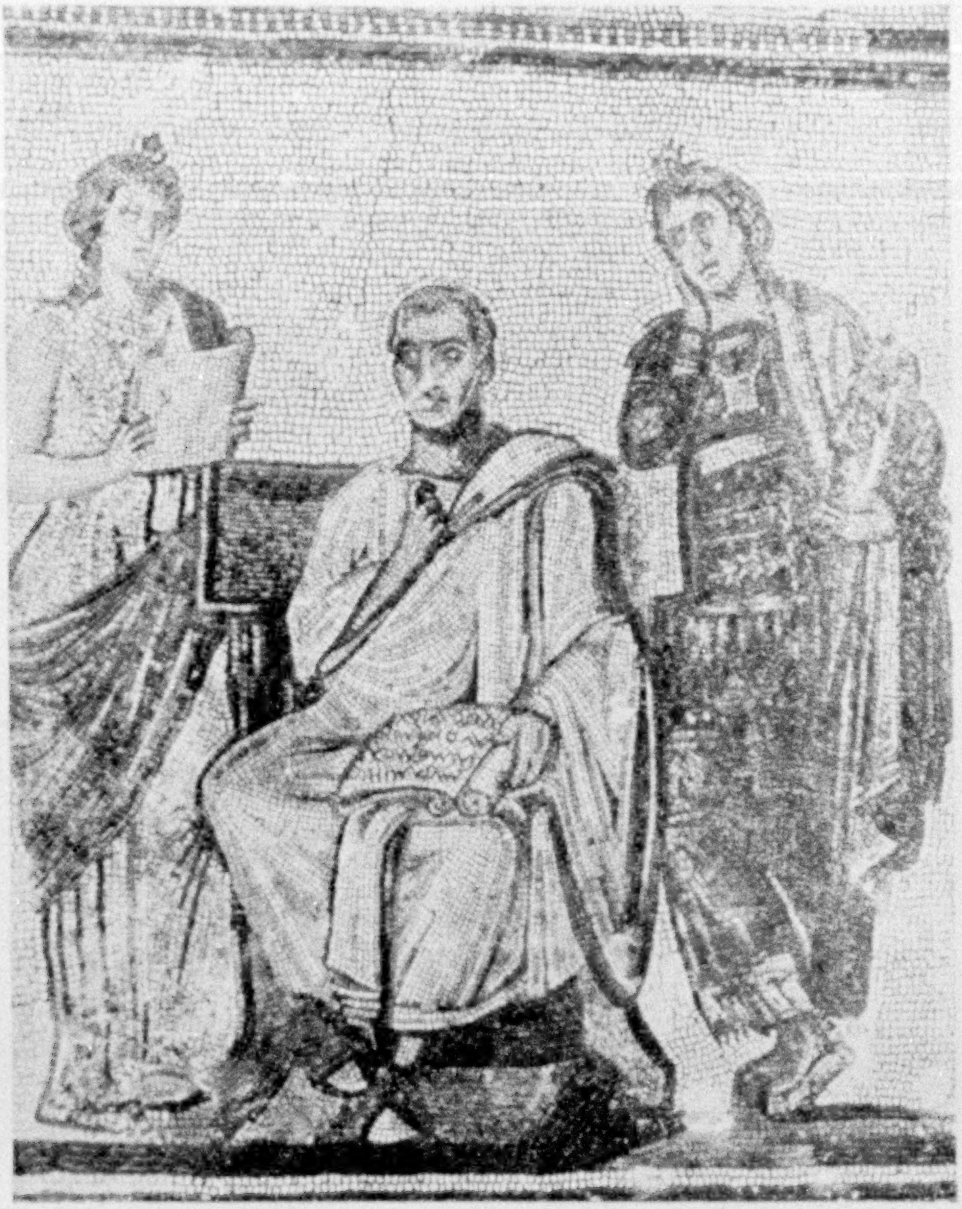
"Here is ceaseless spring and summer in months where summer is strange; twice the cattle yield their increase, twice the tree yields its fruit. But raging tigers are far away, and the lion's savage brood; no aconite cheats hapless gatherers; no scaly serpent speeds his monstrous rings along the ground, nor with huge trailing length winds himself into a coil.

"Think, too, of all those glorious cities and trophies of human toil, all those towns piled by the hand of man on steepy crags, and streams that flow beneath those time-honored walls! Shall I tell of two seas, one that washes it above, and one below? Shall I sing of those mighty lakes? Of thee, Lake Larius [Como], and of thee, Benacus [Lake Garda], swelling with billows and boisterous turmoil of a sea?

"Shall I tell of those havens, and the barrier set against the Lucrine Lake, and how the ocean chafes with mighty wrath, where the waters of the Julian harbor reverberate as the sea rolls back and the Tyrrhenian tide streams into the channels of Avernus?

"Nay, more, this land, too, shows within her veins streams of silver and copper and flows with plenteous rivulets of gold. This land has reared a vigorous race of men, Marsian manhood and Sabine stock, and Ligurians, inured to hardship, and Volscians that bear the spear; this land has bred the Decii, the Marii, and the great Camilli, the Scipios stout in war, and thee, most mighty Cæsar, who now, already conqueror in the distant confines of Asia, drive far from the towers of Rome the unwarlike Indian.

"Hail, realm of Saturn, mighty mother of fruits, mighty mother of men! For thee I fain would tell of themes of ancient glory, of works of ancient art; for thee, I dare to unlock those sacred springs, and sing through Roman towns the Ascræan lay."



Photograph by Luigi Pellerano

A FORMER HAREM NEAR DIDO'S CAPITAL HOLDS THE BEST PORTRAIT OF VERGIL

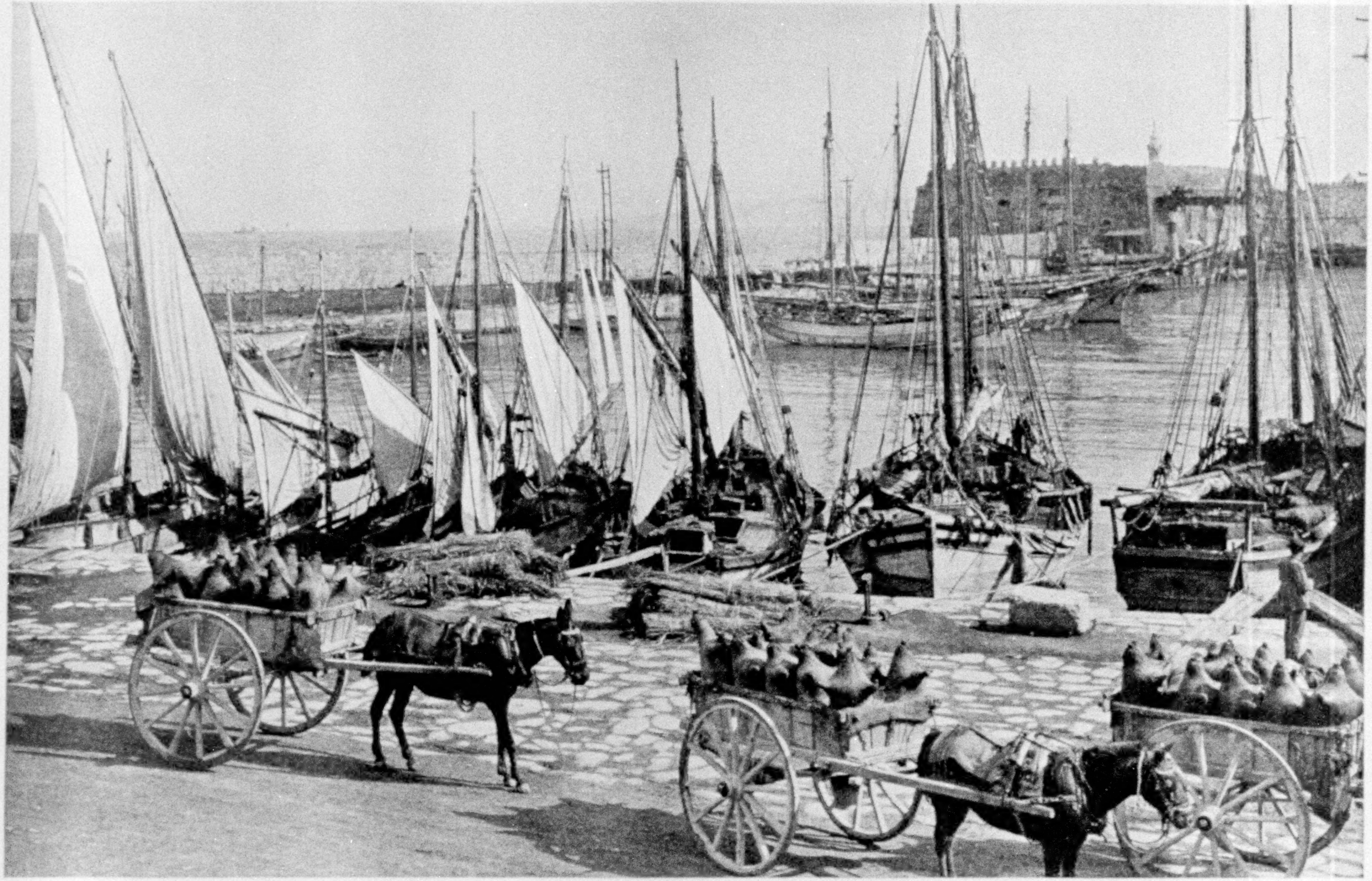
The first-century mosaic, picturing the somewhat emaciated poet between Clio, the Muse of History, and Melpomene, the Muse of Tragedy, is now the chief exhibit in the Vergil Room in the Museum of the Bardo, Tunis, near the site of Carthage. Not the Rome he praised, but the Carthage with whose culture and sufferings he sympathized, now houses this most trustworthy portrait of the poet, found at Susa, the ancient Hadrumetum, ally of Rome in the last Punic war.

### PATRIOTISM IS PARAMOUNT IN HIS WRITINGS

In this graphic description of an ideal country, a golden age of prosperity, Vergil did but portray what he believed actually existent. There is, of course, much exaggeration in his idealized portraiture—a license readily granted poets and panegyrists. But it would be a mistake to regard Vergil as a mere landscape artist whose sole delight was in the loveliness of the land or the picturesqueness of the scenery. He was Rome's most patriotic geographer. While he did, indeed, take delight in Italy's natural splendor, he went beyond this to instill in his fellow citizens not merely an admiration for their land and all its resources, but he would mingle the useful with the lovely, and strove by his lay to stir men to help in peace the country that had won such renown in war.

### A WISE COUNSELOR WHEN HIS NATION FACED BANKRUPTCY

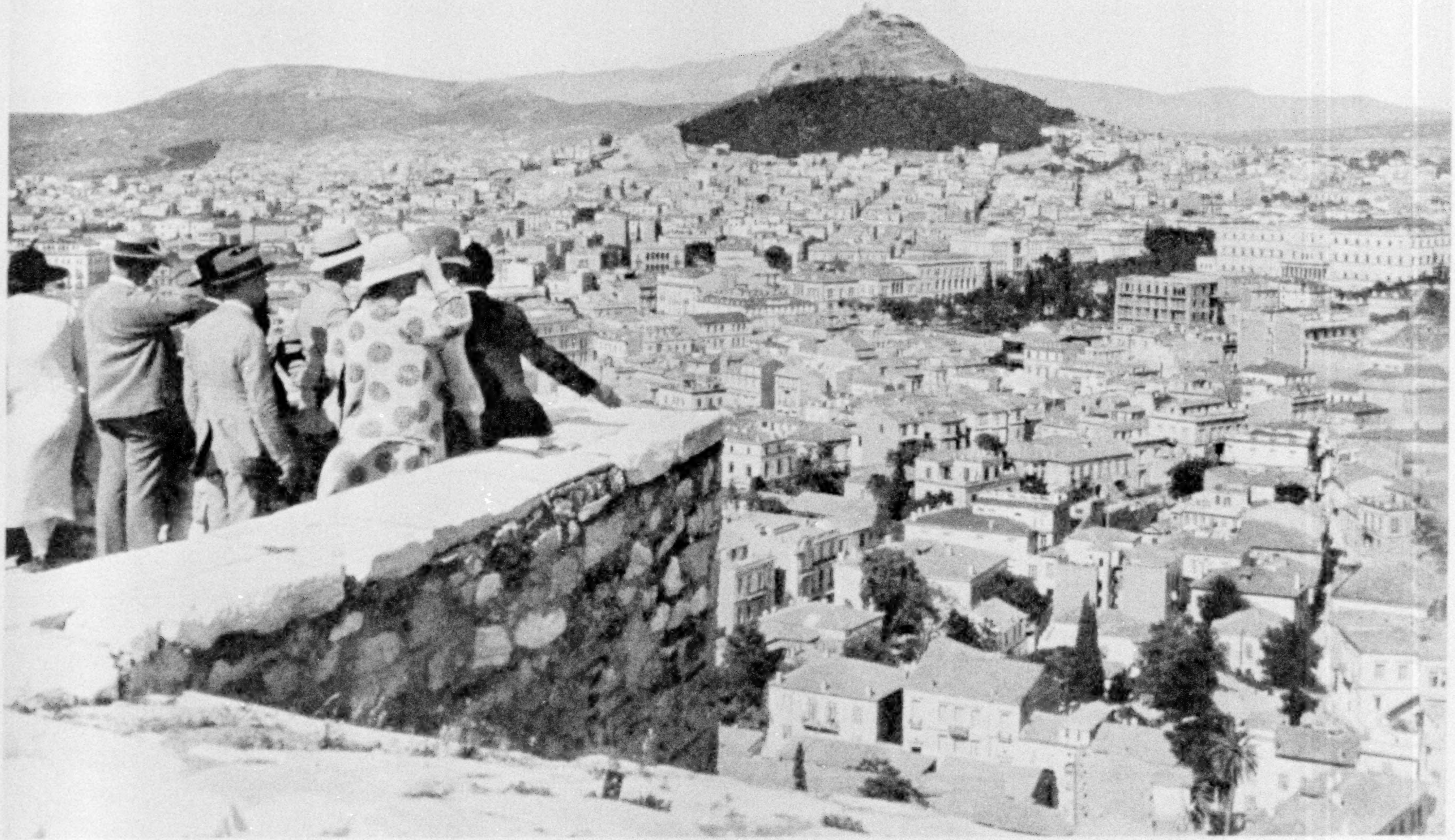
Vergil was in his prime as a poet when Rome was on the point of bankruptcy. Almost continual wars had eaten up the



Photograph by Maynard Owen Williams

SKINS FULL OF BLACK CRETAN WINE AT CANDIA

Somewhat grotesque is a cartload of wine skins, for unless they are very full they wabble like obese, drunken clowns with outstretched arms. In the distance is the Venetian fort with the aid of which Morosini withstood one of the greatest sieges of history, against Fazil Ahmad Kuprili, Grand Vizier of Turkey, before surrendering to save the surviving inhabitants. Disease and an oracle caused Æneas to leave Crete and proceed to Latium. In Vergil's day Crete had become a Roman colony.



Photograph from Ewing Galloway by Branson De Cou

MODERN ATHENS FROM THE ACROPOLIS

After seeing the Temple of Athena Victory, the Propylæa, the Erechtheum with its lovely Caryatid Porch, and the Parthenon, visitors to the Acropolis are conducted to this lookout point above the modern city. In Vergil's day the main city was around to the left, where American archeologists are soon to tear down scores of homes in order to excavate the ancient market place.

Photograph by Henry S. Dennison

PLOWING THE FERTILE ROMAN CAMPAGNA, THE ANCIENT LATIUM

While Rome extended its vast network of good roads, the unreclaimed expanses of the plain known as the Campagna di Roma had their lesson for Vergil. Peasant proprietors had given way to absentee landlordship, and the mosquito had inherited vast areas where older towns had fallen into decay. This vast granary at the very gates of Rome is only now being rescued from disease and neglect, and primitive methods are yielding to modern machinery.

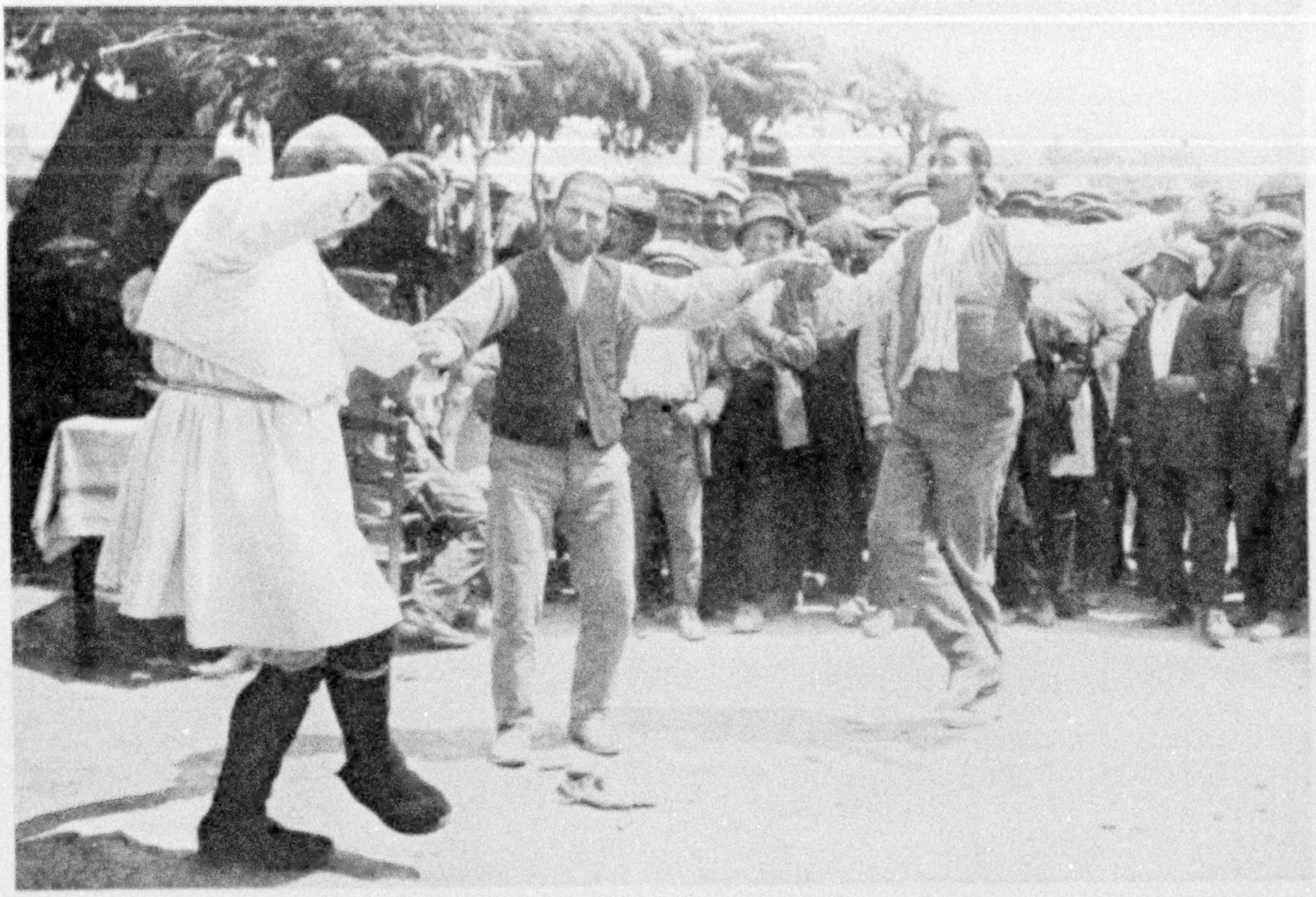
peoples' resources, had driven many from the plow to the sword, and, most threatening of all, the public mind thought more of the city than of the country. An immediate economic reorganization was imperative.

With this end in view, he hoped to do his bit by taking the best and most striking words of Latin language and putting them in sweetest song to tell of the glories of the past and the possibilities of the future; to hold up the unreclaimed lands, which possessed such enormous potential riches, and to show that the only hope for the creation of new wealth would be by the exploitation of Italy's great agricultural resources that were to be found on all sides.

All this requires work and industry. That an example may win his readers to observe more readily his precepts, he devotes greatest care in the concluding book or chapter of his "Georgics" to "heaven's gift, the honey from the skies"; he would take us to the tiny race of bees that live a little world of their own with their great-hearted chieftains, their laws and customs, their tribes and peoples, their battles and glories, "a commonwealth in miniature."

From his earliest years, Vergil had seen his father care for the bees. On the reflective child these immature impressions left a lasting impression; in no part of all Vergil's work does he seem more at home than in the 500 lines that tell of the kingdom of the bees.

The site for the bee-city, the hive, should be sheltered from the wind, nor should wandering cattle that could crush and spoil the neighboring flowers be near, and the swallows and other insect-eating birds should not be granted access. But let there be at hand tiny brooks stealing through the grass, with stones or branches thrown in the water to serve as islands whereon the bees may spread their wings to dry, if by chance they have been sprinkled with the water—and green cassia, and wild thyme and violets, with strong-scented savory, should abound.



GREEK PEASANTS DANCE IN MÉGARA AT EASTER TIME

Scores of women in Albanian costume form a long line which dances up and down between crowds of spectators. The men, less formal in their nondescript garb, form small groups near some al fresco café. Although Albanians settled in large numbers near Mégara, the town itself claims a pure Greek population. It was here that Vergil contracted the fever of which he died, on Italian soil, at Brindisi (see, also, page 443, and text, page 456)

To exclude heat and cold, the entrances to the hive should be narrow. According to Vergil, bees dislike an echo—though modern writers doubt their sense of hearing.

It is when Vergil treats of the habits of the bees that the poet becomes a teacher of civics and sociology, some might say socialism. With the bees the community is everything—and the majesty of common law prevails. There is a fit division of labor; some take up foreign service and go abroad and labor in the fields; others stay at home, making combs; some lead out the full-grown young, the hope of the nation, and train them to toil; again, there are those who pack away the honey, and those who are sentinels at the gates, and those who expel the drones, or, after the swarms have left the hive, put to death these lazy pilferers of the store.

All work for a common end and each bee is zealous in his own task. It is the older folk who stay at home and build their cunningly wrought houses, while the younger ones fly abroad and return late at eventide laden with the rewards of their toil among the ruddy crocus and the dark-red hyacinth.

There is a time for well-earned sleep and a time for tireless toiling. To their sovereign their submission is greater than that of the Egyptians, the Parthians, or any of the orientals. "While the King is safe all are of one mind." They guard him, and attend him in clamorous throngs, for him they expose their bodies to war, and will die a glorious death.

With a full realization of the great change that was taking place in the Roman Government, passing from a republic to a monarchy, it is easy to see that Vergil was a royalist and quite in sympathy with the new Imperial Government.

### WHEN ROME MILITANT BECAME ROME TRIUMPHANT

Vergil, in writing his greatest work, the story of the wanderings and wars of Æneas and the founding of Rome, was inspired by a national sentiment prevalent among the Romans. They were convinced

Photograph by Maynard Owen Williams

ON THE SMALLEST BUT MOST IMPORTANT OF ROME'S SEVEN HILLS

To-day the Capitoline Square is flanked by buildings designed by Michelangelo, with the Palace of the Senators at the left. At the right is the Cordonata, a new approach to the Capitoline Hill, leading up to colossal statues of Castor and Pollux, both here cast in the rôle of Castor, trainer of horses.

of their superiority over all other nations and tribes of men; their greatest destiny was to rule the world.

Possessing as they did unparalleled capacity for conquest and for government, their national self-esteem and pride of empire became more and more evident, and reached its climax during the days of Vergil, when Rome militant became Rome triumphant. "O Romans, conquer and rule the world!" seemed a divine promise that had at last been fulfilled.

Nowhere do we find this enthusiastic patriotism more pronounced than in Vergil's "Æneid." It is the dominant note through 9,896 lines.

He spent eleven years in its composition and had not death carried him off he planned to take three additional years in revising and polishing it. In fact, it was with this in mind that he sailed over to Greece—a journey that proved fatal to him. For it was during the summer of 19 B. C. that he hoped by touring about Greece and on the islands of the Ægean Sea to regain some strength which he seemed of late to have lost. But the journey, with all its fatigue and many discomforts, proved too much for him, and when, upon his arrival at Athens, he found the Emperor Augustus about to set sail for Italy, he begged to join him and return home.

A malarial fever which he caught at Mégara was sapping his strength and during the voyage he gradually grew worse. On September 21, a few days after he had landed at Brindisi, he passed away at the age of 51. Not far from his seaside villa to Posillipo, on the road from Naples to Pozzuoli, he is said to have been buried, and here a tomb was erected which has enjoyed the reverence of ages.

As he lay dying in Brindisi and realized his living hours were few, he begged his friends to bring him the rolls of manuscript whereon he had labored so many years to produce Rome's great epic poem. His purpose was to burn these pages, as he would not bequeath to posterity a work in

Photograph by Maynard Owen Williams

MODERN ATHENS' CHIEF CLUE TO THE PRISTINE BEAUTY OF CLASSIC TIMES

The Academy of Science, with its painted and gilded walls, Ionic columns, sculptured pediment showing the birth of Athena, and flanking statues, gives one an idea of the color, as well as the form, of classic buildings. Athena and Apollo stand on the high Ionic columns; Plato and Socrates sit beside the entrance stairway.

so unfinished and unpolished a condition. His friends managed to put him off with a promise not to permit its publication. Fortunately, the Emperor heard of this and saved the "Æneid" to the world.

This great poem contains many exquisite episodes. In the sixth book, as a conclusion to a magnificent pageant of Roman heroes, the poet tells of a youth of wondrous beauty who, if he had been able to break the cruel bonds of fate, would have astounded the world by his magnificence and wisdom as a ruler and by his valor and victories as a leader.

The reference is to Marcellus, the son of Octavia, sister of Augustus, whom the latter had adopted and had chosen to succeed him on the throne. It is said that when Vergil read these lines in the presence of the Emperor, Octavia swooned, so great was her emotion.

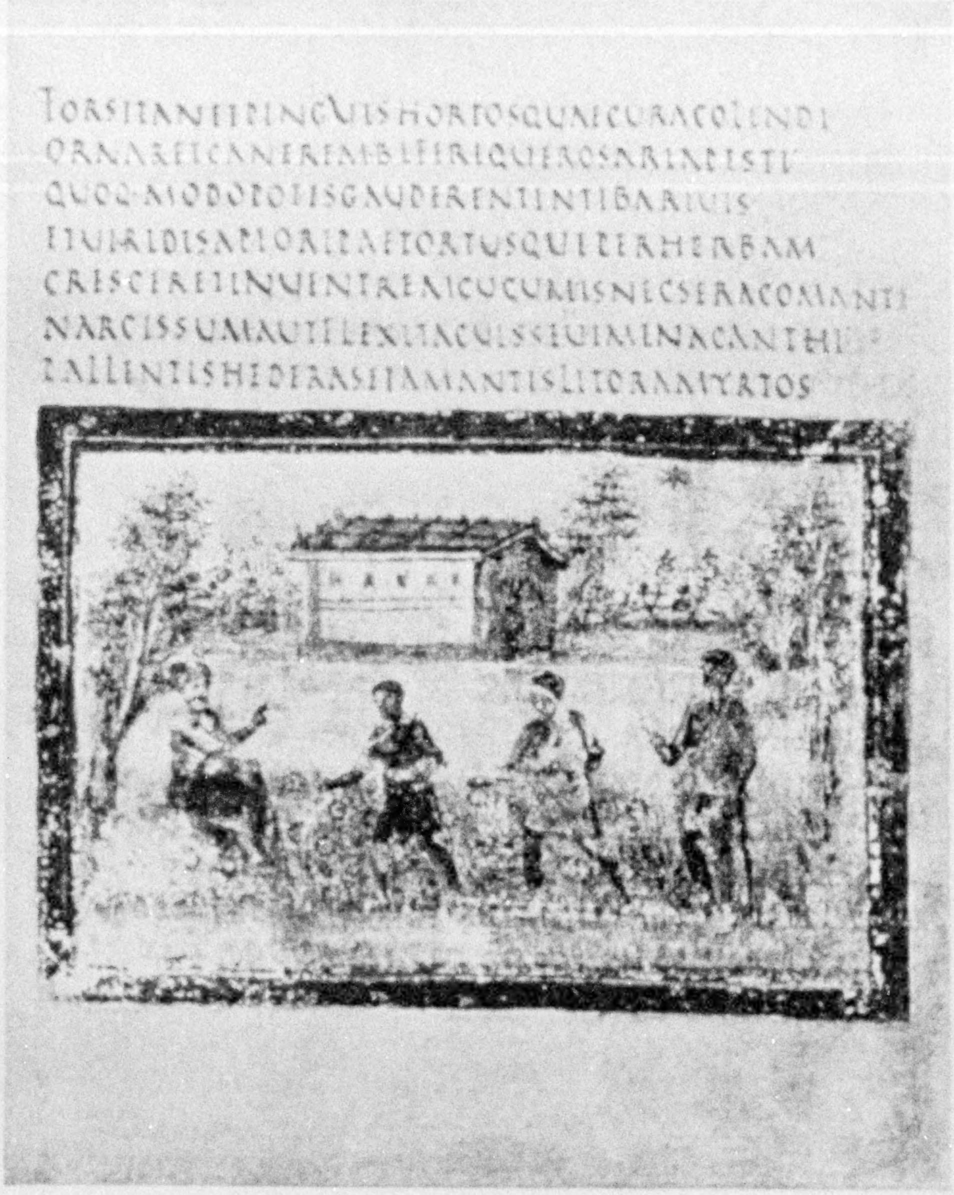
### THE ARGUMENT OF THE "ÆNEID"

There was an old Roman tradition that the Trojans had come from Asia and had settled in Italy; the Romans loved to look upon them as the first founders of the Roman state.

For ten years war has waged about the city of Troy; at last, by cunning and the help of unfavorable gods, the city falls. But Æneas, the son of Anchises and the goddess Venus, escapes with his old father and young son and a faithful band of friends.

Æneas is predestined to be the founder of Rome, though it is decreed that many vicissitudes must first be met and many a struggle undergone. The "Æneid" relates this dramatic story, which might be characterized as a tale of glorification of the Romans and of the illustrious line of the Cæsars.

After reaching as far as Sicily, the Trojan fleet is driven to the African shore; here they are met with all kindness by the Carthaginians and introduced to the court of the Phœnician queen, Dido. A sumptuous banquet is given in their honor, during which Æneas by request tells the sad story of the capture and sack of Troy and of his own escape.



FORSITANETPINGUISHORTOSQUAECURACOLENDI
ORNARETCANEREMBIFERIQUEROSARIAPESTI
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Photograph by Luigi Pellerano

A PAGE FROM THE VATICAN MANUSCRIPT OF VERGIL'S WORKS

Although this fourth- or fifth-century manuscript was copied by a single hand, at least three different painters worked on the fifty miniature illustrations. The page reproduced is from the Fourth Book of the "Georgics," lines 118-124, freely translated on page 446.

Queen Dido falls desperately in love with Æneas; with Cupid's help she induces him to settle down at Carthage. But Jupiter, King of Heaven, sends the messenger Mercury to warn him of his forgetfulness of the great destiny that is his, namely, to found a new realm in Italy.

Æneas at once prepares to depart; in vain Dido scorns his appeal to the warning of the Father of the Gods and to fate's decree. He departs and Dido, brokenhearted, commits suicide.

Again the Trojan fleet reaches Sicily; threatening weather forces a landing at Drepanum, the very spot where his father had died. Here the customary funeral games are held on the anniversary.

As the night drew on, there seemed to appear the likeness of his father, Anchises, who spoke as follows:

"O son, dearer to me than life when life was mine; child of mine, sorely tried by Troy's sad fate. Lo, I come by Jupiter's mandate, who at last has had pity on you. In Latium must you conquer a hard, rugged people. But, first of all, must you descend to the realms below and through the depths of Avernus seek a meeting with me. Hither the Sibyl will lead you and you shall learn of your race and of the city that is given you."

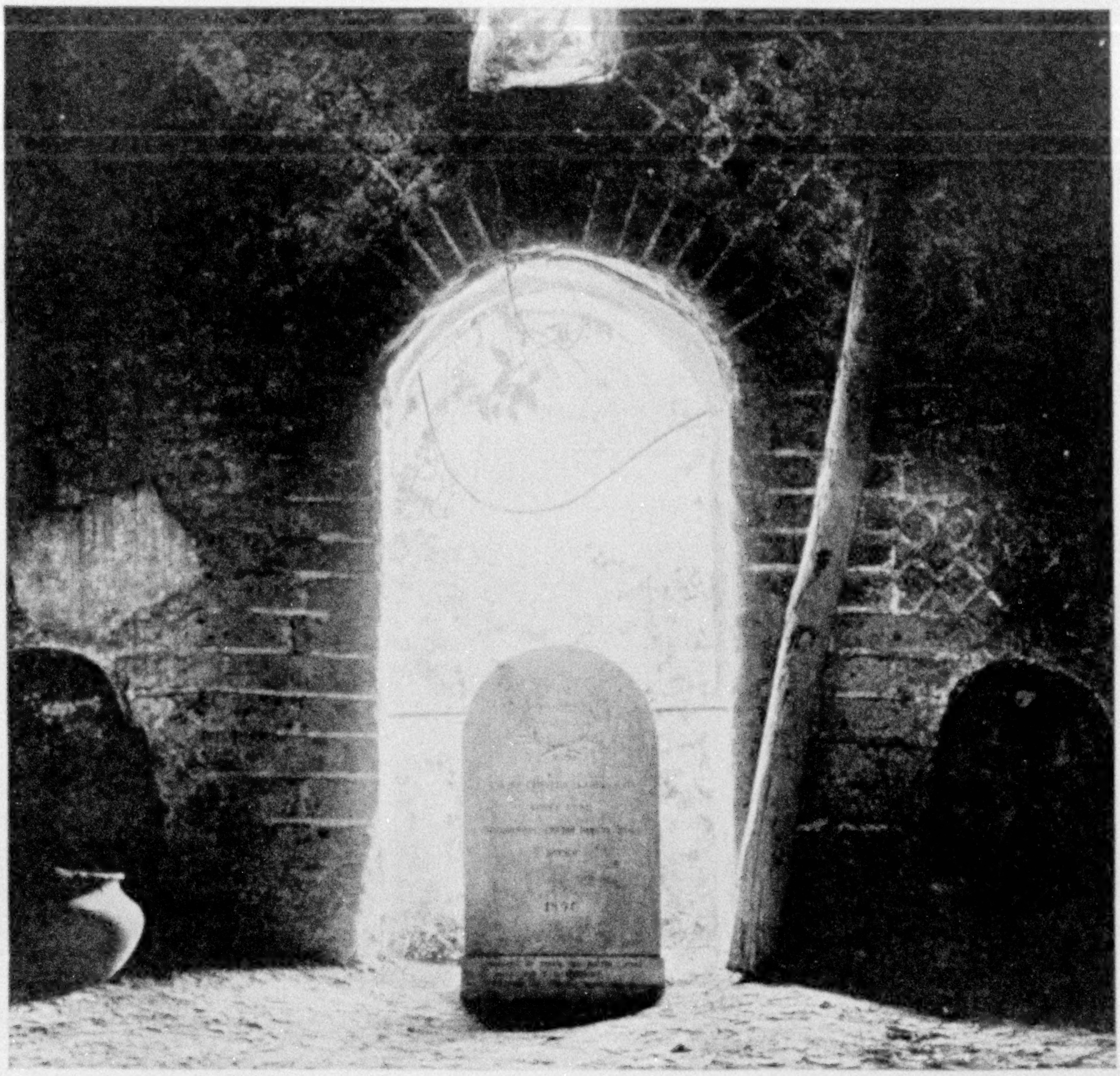
Favored by Neptune, god of the sea, Æneas reaches Italy and arrives at Cumæ, on the shores of Campania, not far from Naples.

In the vicinity is Lake Averno, from which the ancients believed there was a mysterious cavern that led to the abode of the dead. This superstition was helped by the fact that the volcanic hills of Cumæ are severed by numerous grottoes.

Vergil tells of "a hundred wide mouths" and "a hundred gateways from which rush as many voices, the answers of the Sibyl."

Before entering the cavern Æneas prays to Apollo and promises that some day his descendants will rear a temple in his honor; this was built by Augustus 28 B. C., on the Palatine Hill, in Rome.

Æneas then prays the Sibyl to lead him to the shade of his father. By her aid he finds a golden bough sacred to Proserpine, Queen of Hades. This will serve as his passport through the underworld.



Photograph by Alinari

THE SOMBER RESTING PLACE OF ONE WHO LOVED BUCOLIC FREEDOM

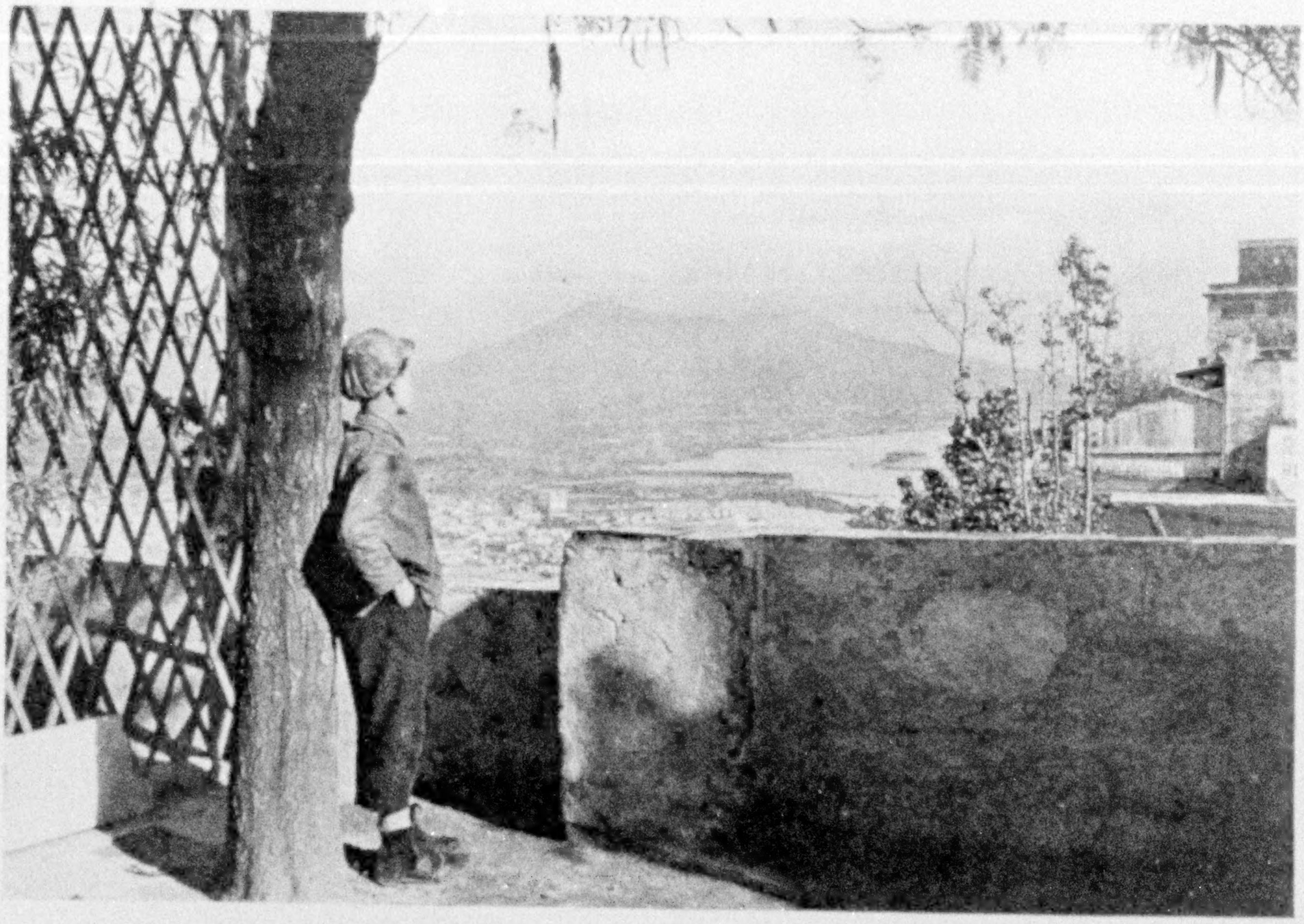
The tomb of Vergil, near Naples, was acquired by the Italian Government in 1924. Tradition has it that Petrarch planted a laurel on the tomb of the poet. A medieval inscription reads, "Whose ashes are these? These are the remains of the mound that covered him who sang of pastures, fields, and leaders" (see, also, page 465).

As he quits the cavern and wanders along the dry beach, he discovers the unburied body of his dead comrade, Misenus, the trumpeter. Immediately Æneas and his faithful companion, Achates, raise a funeral pyre with the pitchy pine and oak logs, and perform the last rites upon the promontory to be henceforth called Misenum. Then, under the leadership of the Cumæan Sibyl, Æneas enters the regions of the mysterious lower world.

They cross the River Styx and go about scanning the abodes assigned to the various classes of the dead, and marking the penalties inflicted on wicked souls. Then they enter Elysium, where the blessed dwell, and here Æneas meets his father's spirit.

In eloquent discourse the sire expounds how souls of the departed may enter new bodies and live anew upon the earth. He places before him with prophetic vision the pageant of his descendants, heroes all, whose crowning glory will come in the cycle of a great destiny when a universal empire is established. Before parting he warns his son of wars to be fought, and toils to be faced to found Rome, some day to be mistress of the world.

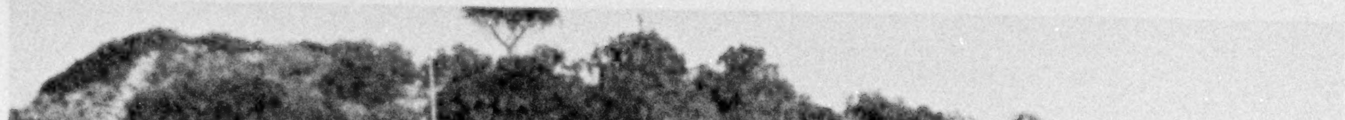
Æneas departs from the nether world with full confidence in his great calling—a favored son of Providence. He hurries



Photograph by Clifton Adams

A WORLD-FAMOUS VIEW OF AN AGELESS CITY: NAPLES AND MOUNT VESUVIUS

Cloud and color, island-dotted bay and smoking volcano, combine to make this scene from Montesano an enduring souvenir of Italy's great port.



Photograph by Luigi Pellerano

MEDIEVAL LEGEND HAS IT THAT VERGIL HERE HAD A MAGICIAN'S LABORATORY

Sailors returning to the Bay of Naples sacrificed to Fortuna on this promontory, where tradition locates the "rock" or "school" of Vergil. From the rock at the right there is a fine panorama of scenes beloved by the author of the "Æneid."

Photograph by Luigi Pellerano

NEAR THIS ROCK PROMONTORY THE POET SANG HIS PRAISES OF NATURE

From La Gaiola, favorite outlook point near Vergil's villa, one enjoys a widespread view of the Bay of Naples from Ischia around to Capri.

to his companions and bids them set sail for Latium. Here Æneas's nurse, Caieta, dies; the spot where she is buried still bears her name as Gaeta.

Making his way to the mouth of the Tiber, Æneas meets King Latinus, the ruler of the Latins. He makes an alliance with him and the hand of the king's daughter, Lavinia, is promised as a very charming part of the treaty. However, Turnus, the king of the Rutulians, has coveted marriage with this princess, and he immediately becomes a dangerous rival.

The river god, Father Tiber, advises Æneas to secure Evander, king of an Arcadian colony that has settled on the site where the future eternal city of Rome is to stand; this king in turn secures the aid of the Tuscans, a powerful, warlike tribe that dwells to the north of the Tiber.

### A SHY MAN OF MARK

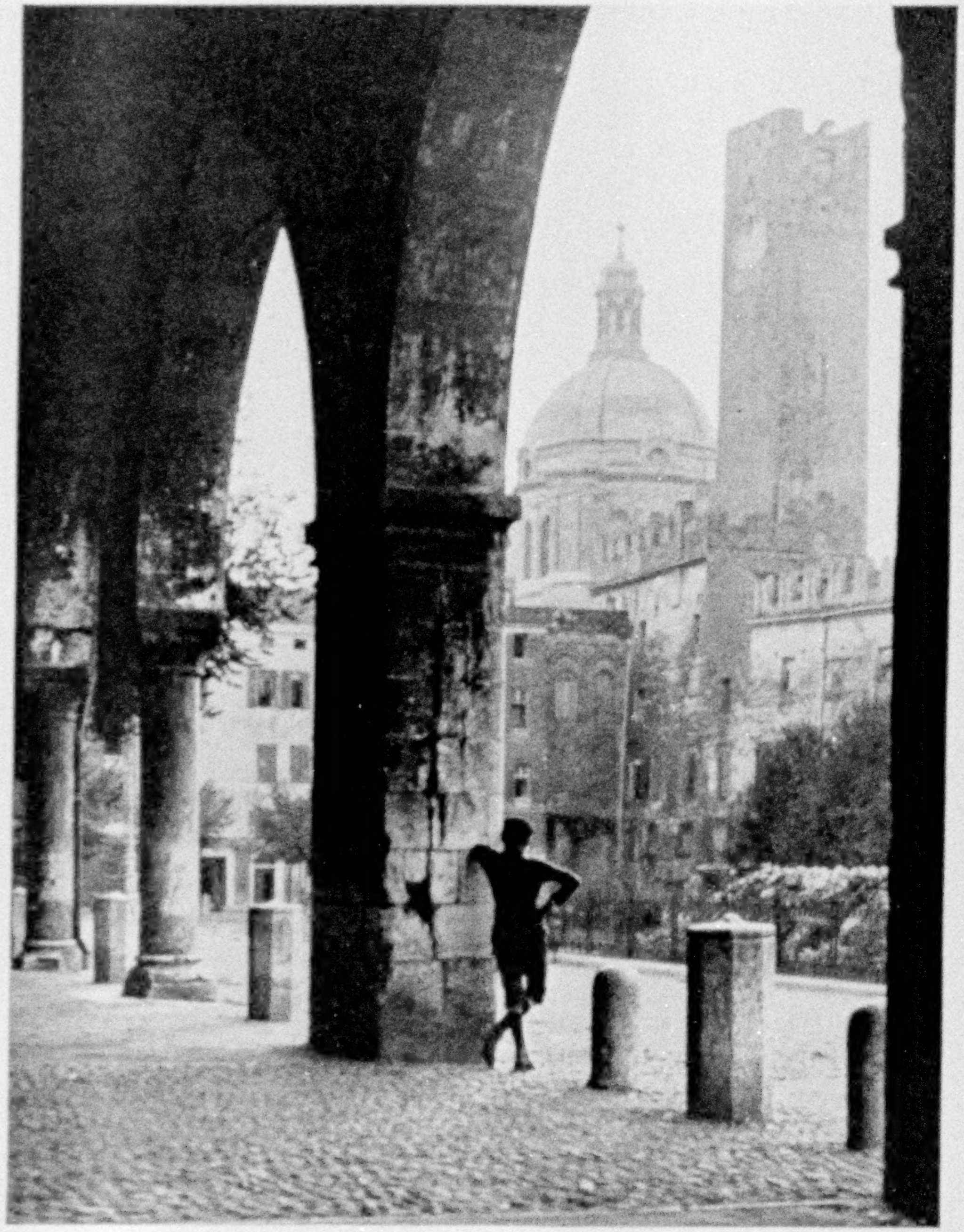
After many battles the Trojan is victorious, his power is established in Italy, and the great race of Romans starts to make its famous history, culminating in the rule of the Cæsars, the golden age of the Empire which is destined to enjoy endless sway over all the world.

Vergil, even in his lifetime, had the universal admiration of his countrymen; his contemporary poets or poetasters allowed him eminence and resignedly bowed down to him. Once at the theater, when some of his verses were recited, he happened to be present and to his surprise the whole house arose and greeted him. The Emperor himself was not treated with greater attention.

Yet Vergil was shy and did not court public applause. As he walked the streets of Rome or Naples he disliked to be marked out, and would hide in doorways to escape the notice of passers-by.

Many ancients wrote treatises on his poems, many lectured on various phases of his works. This continued for centuries. The early Christian writers, especially St. Augustine, were ardent admirers of the Mantuan, and revered him as no other pagan had been. There is a tradition, though rather doubtful, that St. Paul once visited his tomb at Naples and wept as he exclaimed: "O greatest of poets, what should I have made of you if I could have found you still alive!"

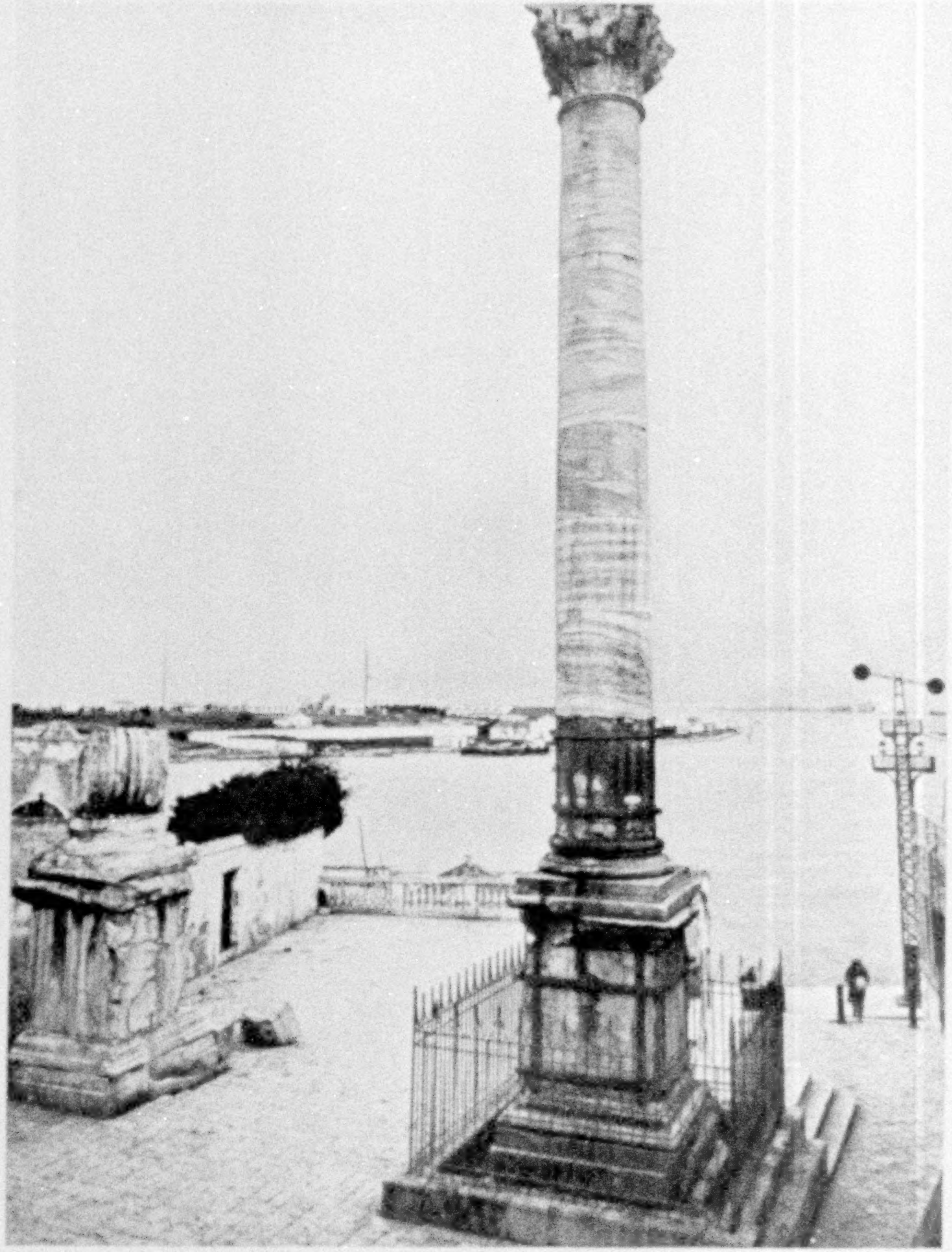
The number of excellent manuscripts preserved to us from the fourth and fifth



Photograph by Donald McLeish

THE CATHEDRAL OF SS. PETER AND PAUL AT MANTUA

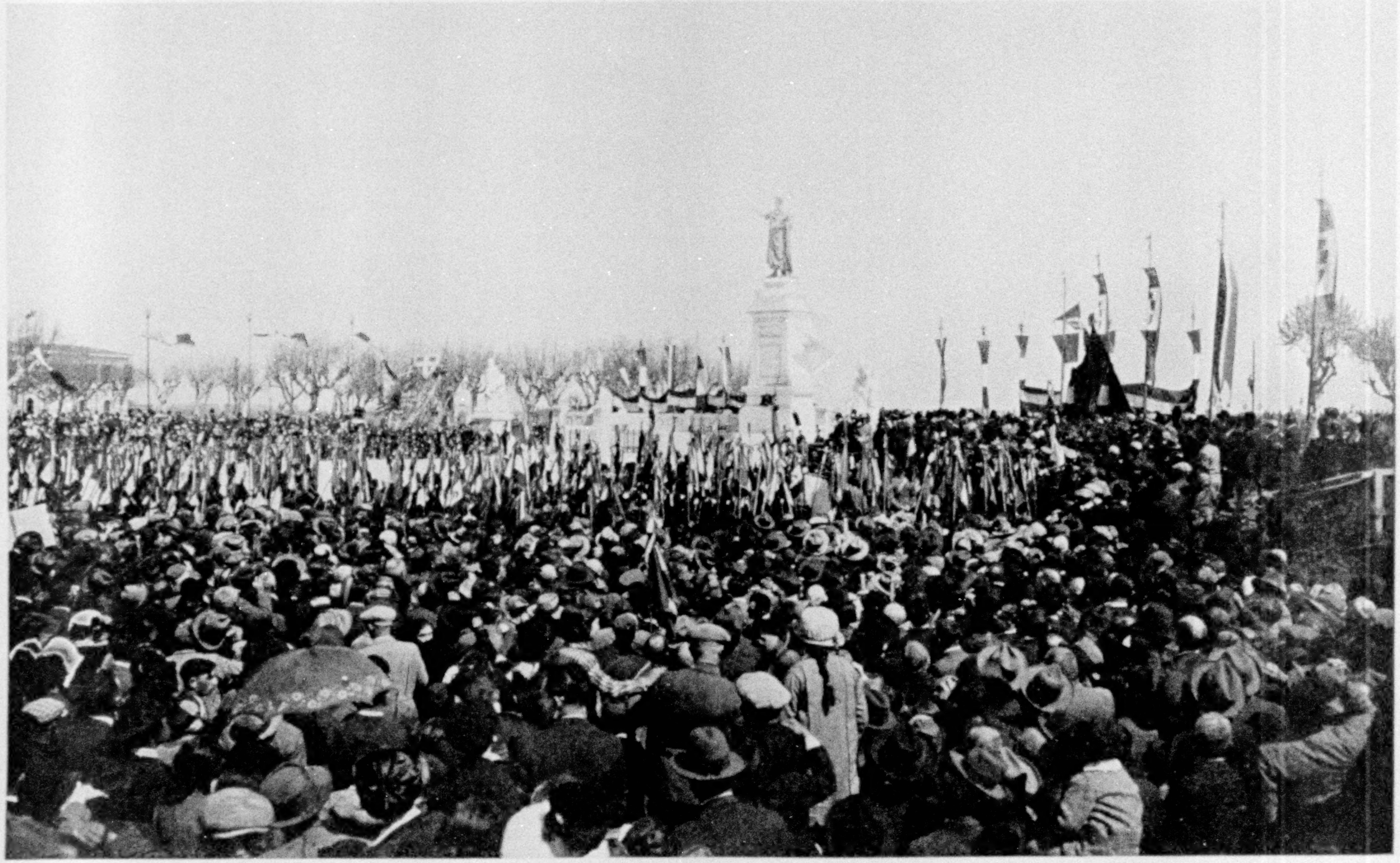
Under the Gonzaga, lords of Mantua, the city became a great cultural center and the district town of Vergil became the town of Giulio Romano, pupil of Raphael, who remodeled the interior of the Cathedral. The 12th-century campanile was never finished.



Photograph by Cav. D. Cappello

TERMINUS OF HIGHWAY AND SKYWAY AT BRINDISI

Returning from Greece, Vergil reached Brindisi in time to die on Italian soil. This unfluted column, which marked the end of the Appian Way, is now the trademark of an air line to Istanbul (Constantinople). In the background are hangars for seaplanes to Greece and Albania.



Photograph by Premi

FOCUS OF WORLD INTEREST AFTER TWO THOUSAND YEARS

On October 15, 1930, the Bimillennial Celebration in honor of Mantua's greatest citizen is to center about this monument in the Vergilian Garden. This picture shows the unveiling of the monument on April 21, 1927.

centuries bear witness to his popularity and prestige among the monks. Wherever Roman rule prevailed there were the works of Vergil, the standard texts for the education of youth.

Later on, there was a decadence and the people became too ignorant to read his lines or enjoy his power; he then became somewhat a demigod; a magician's powers were attributed to him; and fables and legends surround him as no other writer in the history of the world. As his mother's name was Magia Polla, some went so far as to see therein a prophetic reason for these wild and weird beliefs.

Christian reverence seems to have been built upon the belief that the Fourth Eclogue of Vergil was a real prophecy of the coming of Christ. There the poet tells of the new golden age to come during the reign of Augustus—the birth of a wondrous child. The earth is to be freed from guilt and fear and dread. "He shall be given a life divine." For this child the earth will no longer need to be tilled to bring forth fruit; the goats with swollen udders will of themselves return at the hour of milking; the herds will no more fear the mighty lions; serpents will perish, as will all poisonous plants. Goodly purple grapes will hang among wild brambles, oaks will distil honey; nay, every land will bear all fruits, and there will be no need for the harrow or the plow or the pruning-hook; the rams in the meadows will change their fleece to saffron yellow, to scarlet red or royal purple, and all things will exult in this wondrous babe, the offspring of the gods.

Vergil's prayer is that such length of days may be granted him to tell of these marvels and to chant with inspiration the wonders of the golden age. Quite obviously, to those familiar with the Old Testament, all this suggests certain chapters of Isaiah, which prophesy the coming of the King of Kings and the Prince of Peace.

## A PAGAN ALMOST BECOMES A SAINT

Constantine the Great, after the establishment of Christianity as the state religion, accepts the Fourth Eclogue as a prophecy—this in his address to the Empire. So much did this idea progress that Vergil began to be given a part in Christian worship and liturgy, so that in the fifth century Pope Gelasius I had to issue a special order that Vergil's famous poem be excluded from the canon of the Scriptures and not be given a place with the prophets of the Old Law! It was not at that time an uncommon thing for the Mantuan to be given such honors in the Church services.

Others, not satisfied with bestowing on Vergil an honorary doctorate in Divinity, wished to do the same in philosophy and he was hailed as the Plato of the poets, though there is very little Platonic philosophy in his writings; in fact, he seems not addicted to any particular school.

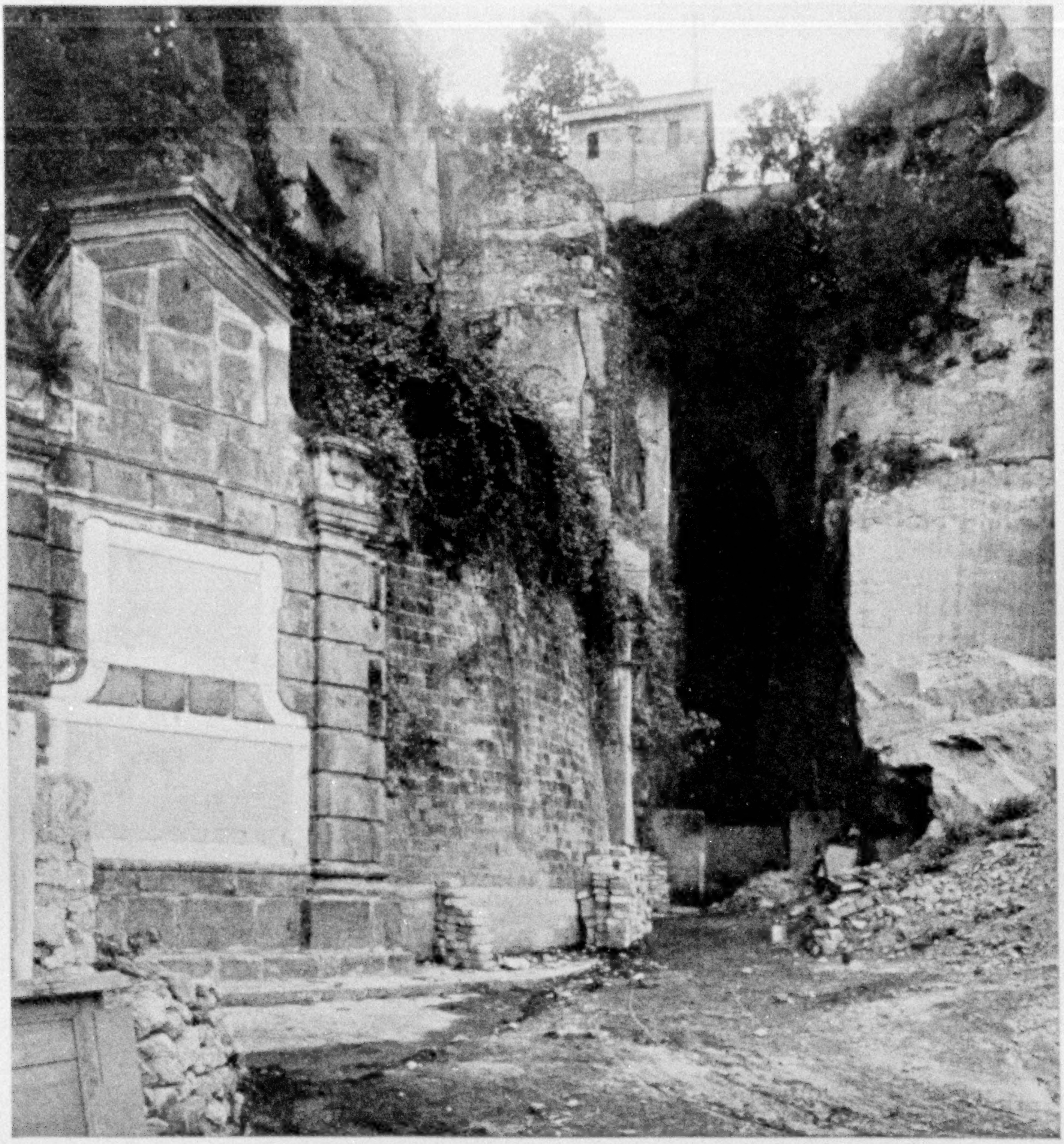
Dante, in his "Divine Comedy," is far more logical and quite orthodox; he makes Vergil his guide and companion in his pilgrimage to the Inferno and the Purgatorio; he heaps upon him titles and epithets of honor, distinction and affection, all of the highest order, but always within the range of a pagan poet.

In view of rather recent political crises and changes, it would seem that Dante's sighs for a united and supreme Italy were inspired by his constant study of Vergil. As we have seen, the Mantuan was ever yearning to make Rome embrace all Italy and to make all Italy bow to Rome.

Many other poets have found in Vergil their Pierian Spring and have drunk deep therefrom. As Dante, the father of all modern literature, so, too, Chaucer, the father of English literature, and his many followers down to our own day, felt the inspirational power of Vergil's genius and have taken him as their master and their model, their sage guide and faithful escort.

## ITALY'S DEBT TO VERGIL

Vergil has done much for Italy. His "Eclogues" depict in loveliest verses the pastoral life of the shepherds. His "Georgics" give a complete course in rural didactics for the Italian farmer; his greatest work, the "Æneid," gives an ancestry for the Romans back to the gods, and prophesies a future of unparalleled glory and splendor. When Alexander the Great was traversing, victoriously, over eastern Europe and Asia, he is said to have stopped at the tomb of the greatest of Greek warriors, Achilles, and wept selfish tears. He saw what the blind poet, Homer, had done to immortalize the son of Peleus, and there was no bard inspired to tell the glorious victories of the son of Philip of Macedon. Italy has been more fortunate than Alexander. Her praises have been put upon a monument more lasting than bronze,



Photograph by Gabinetto

TO MAKE VERGIL'S OBSCURE TOMB ACCESSIBLE TO ALL

At the left is a long epitaph to the poet, whose tomb, in an ancient funerary vault, is just below the building against the skyline. New paths have been constructed to enable students to visit the hitherto inaccessible tomb of the greatest Latin poet (see, also, page 459).

which the wreckful siege of countless ages cannot destroy nor Time's fell hand deface.

It is no wonder, then, that amid the world-wide commemoration of the Vergilian bimillenary, the Italians should lead in grandiose festivals and gorgeous celebrations.

The Italian Academy has offered a prize of 5,000 lire for the best ode on Vergil. Arnaldo Mussolini, brother of the Duce, has been superintending the development of a memorial park near Mantua. A set of bimillenary stamps has been issued by the Royal Post Office of the Italian Government. During the first two weeks of October, Naples will hold commemorative exercises at Vergil's tomb.

Special tours have been arranged to those spots specially mentioned in Vergil's "Æneid"—the Cave of the Cumæan Sibyl, Lake Averno, Gaeta, Ostia, and Sicilian points of special archeological value. The most eminent scholars have been secured to conduct these tours and courses. A Vergilian Exposition is being held in the Gonzaga palace at Mantua, in which city all ceremonies will culminate on October 15—Vergil's birthday anniversary.

# CHÂTEAU LAND—FRANCE'S PAGEANT ON THE LOIRE

SOMBER donjons clinging to scarp and cliff; towers and turrets flung stark against the blue; broken battlements lording it over hill and valley; or fairy walls rising undinelike from shady waters—of such are the châteaux of Old Touraine and its neighboring provinces.

France numbers her châteaux by hundreds, of course; but the "château country," properly speaking, is that stretch from Orléans and Blois down through Langeais and Chinon. Here, along the azure Loire, France's longest river, and of tributaries like the Cher, the Indre, and the Vienne, these superbly wrought residences of king and noble are strung as thick as pearls in a dowager's necklace. In this favored region beauty clasps hands with history, architecture with site, and romance sheds its mellow glow over tragedy to evoke perpetual enchantment.

It is not strange that this is so. Down to Louis XIV the Loire provinces, especially Old Touraine, were the chosen residences of the kings, who preferred the more advantageous sites in this "garden" region to the sandy, swampy areas of Versailles. Here, too, France has staged many of the greatest events in her history, especially from Joan of Arc's day down to the stirring times of 1870. The Loire itself, before the railroads came and navigation practically ceased, was for centuries the chief trade route and highway of communication between the Mediterranean and Atlantic. As the "national river," it is well named.

### EACH CHÂTEAU HAS ITS SPECIAL APPEAL

In this hill-perched castle a king made love to his lady; over this scarred fortress Huguenot and Catholic fought to the death. Around that keep knights spurred and clashed. This regal mansion poets, philosophers, wits, and court beauties have endowed with names famous in literary annals. Of death and terror, of tinkling laughter and silken dalliance, these old châteaux have run the gamut.

Defense was the first object in château-building, but in the 15th and 16th centuries some were constructed more for residence. The French therefore distinguish the *château fort*, the fortified type, from the *château de plaisance*, or residential type, and point to the structures of the Loire country as illustrating the development of the one into the other.

The Langeais of Fulk the Black (see, also, Color Plate VI), with its 10th-century keep, probably the oldest in France, is a perfect example of château fort, built just before the Renaissance. Loches, too (see Color Plate VIII), is one of the most soul- and eye-satisfying medieval strongholds. Its grimness is softened, however, by memories of Agnes Sorel, whose tomb here bears an inscription calling successively upon God, Apollo, Diana, and Isis!

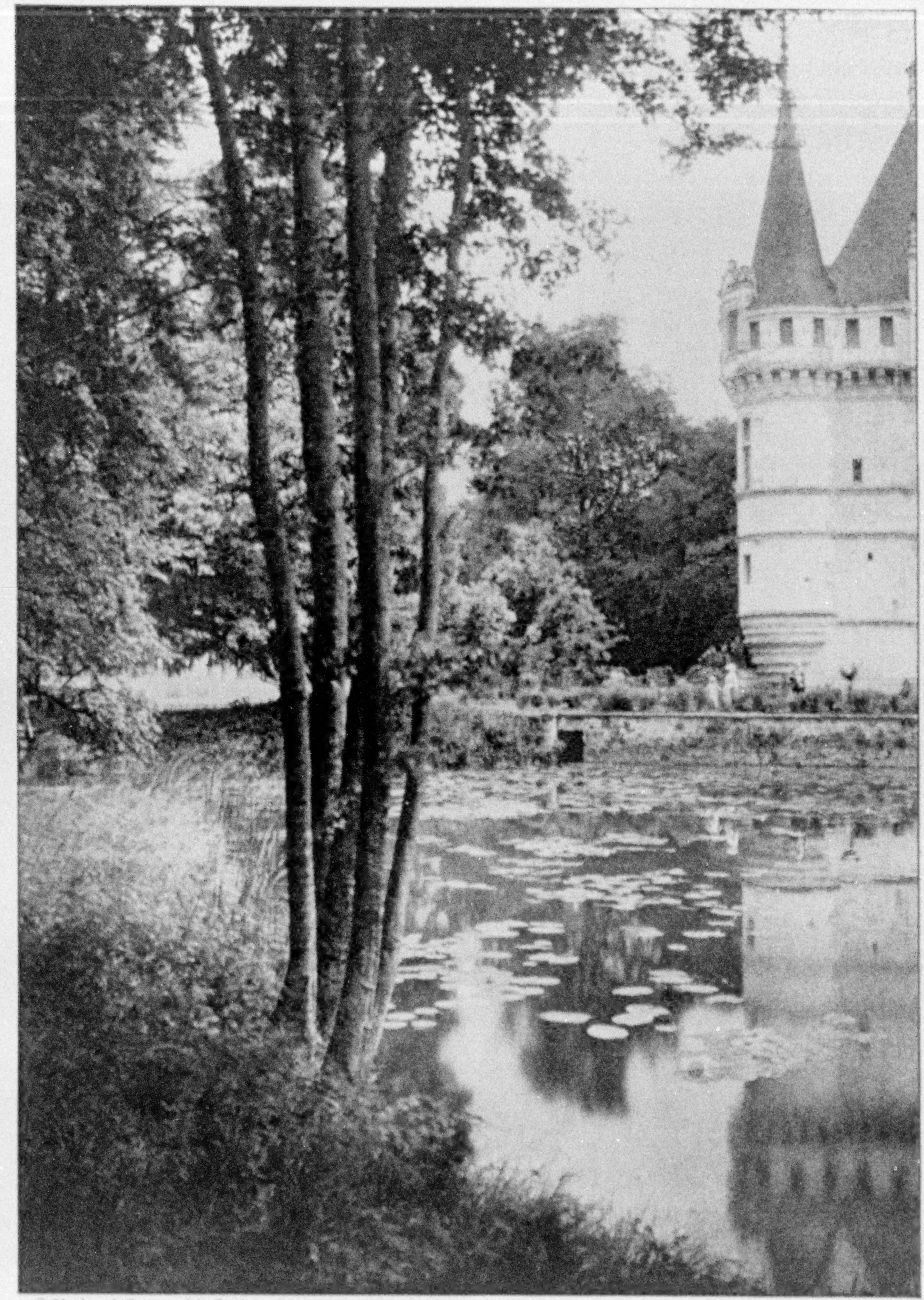
### A CASTLE OF DREAMS COME TRUE

Of the plaisance type of the transition period, but retaining some medieval features, is Azay-le-Rideau, the castle of dreams come true (see Color Plate I). Balzac's joyous "Contes Drolatiques" are indispensable here, for his felicitous account of how Azay came to be built. Then there are also Chambord, "the colossal caprice," and Chenonceaux (see Color Plates III and V), and Blois, a Renaissance masterpiece with an old fortress described by chronicler Froissart as "fair, strong, and sturdy, and one of the finest in the kingdom."

What fascinating ghosts people this famous pile! Here vagabond Villon, poet-king of Parisian tatterdemalions, visited the literary court of Charles of Orléans, himself a poet of no mean distinction and remembered for his "Winter has cast his cloak away." But even more vivid, to mention but a few, are the ghosts of Anne of Brittany, of Catherine de' Medici (here again Balzac and Dumas are good companions), and the Duke of Guise, after whose assassination treacherous Henry III spurned the corpse with his foot. "Mon Dieu!" he exclaimed. "He looks even bigger when he's dead than when he was alive."

Blois's four wings set around a courtyard are memorable, as is also the façade of Francis I, the king who was "marvelously addicted to building." On its inner section is the exquisite spiral staircase, lavishly carved, which ascends within an openwork tower.

It is a wrench to leave Blois, but time-stained Châteaudun, to the north, deserves



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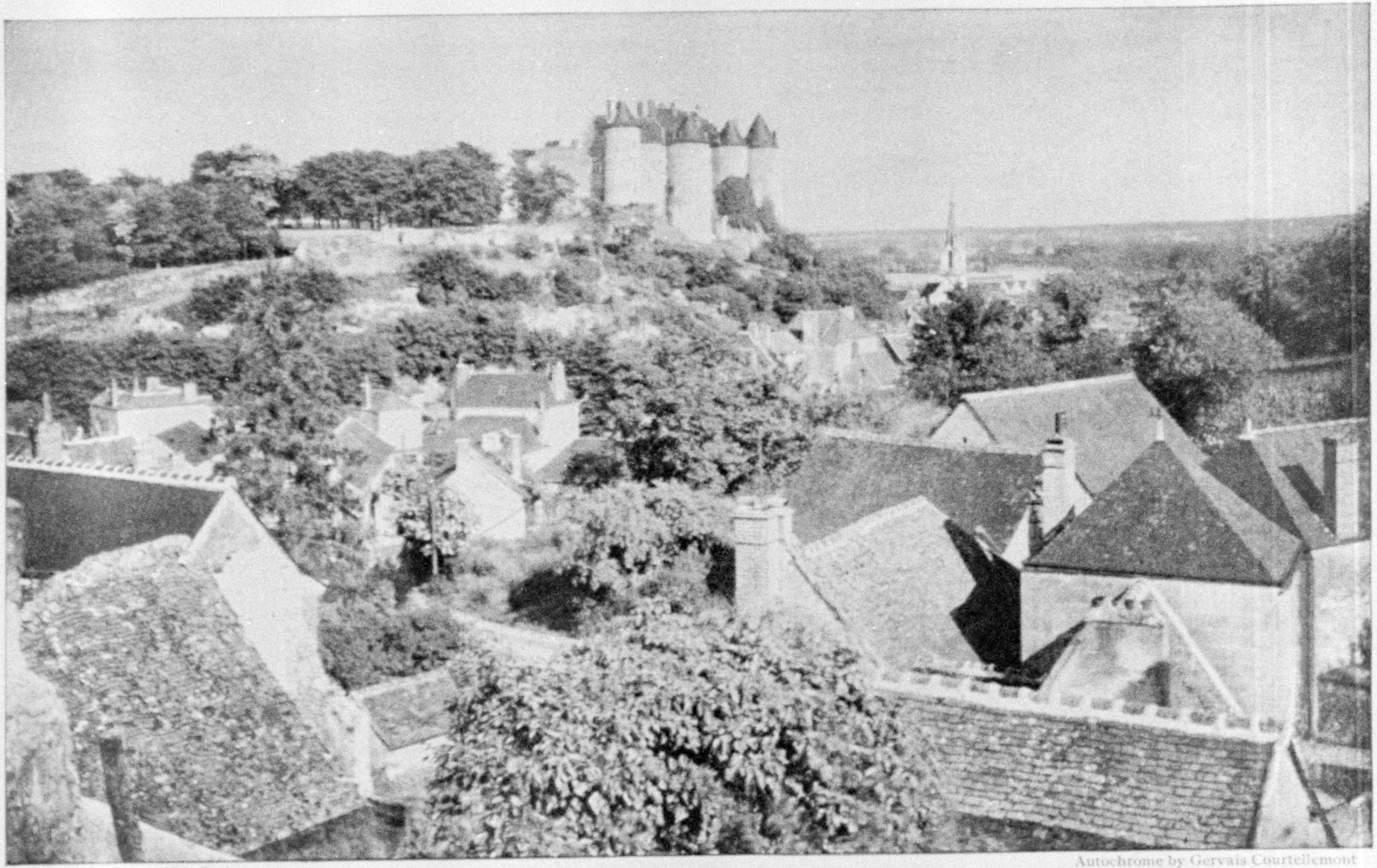
A CASTLE MOAT MIRRORS A FLOWER OF THE FRENCH RENAISSANCE

Together with Chenonceaux (see Color Plate V), the Château of Azay-le-Rideau, on the Indre River, is one of the most charming 16th-century structures in France. Although now a Government museum, it remains a veritable fairy castle, set in enchanting surroundings that invite dreams and reveries.



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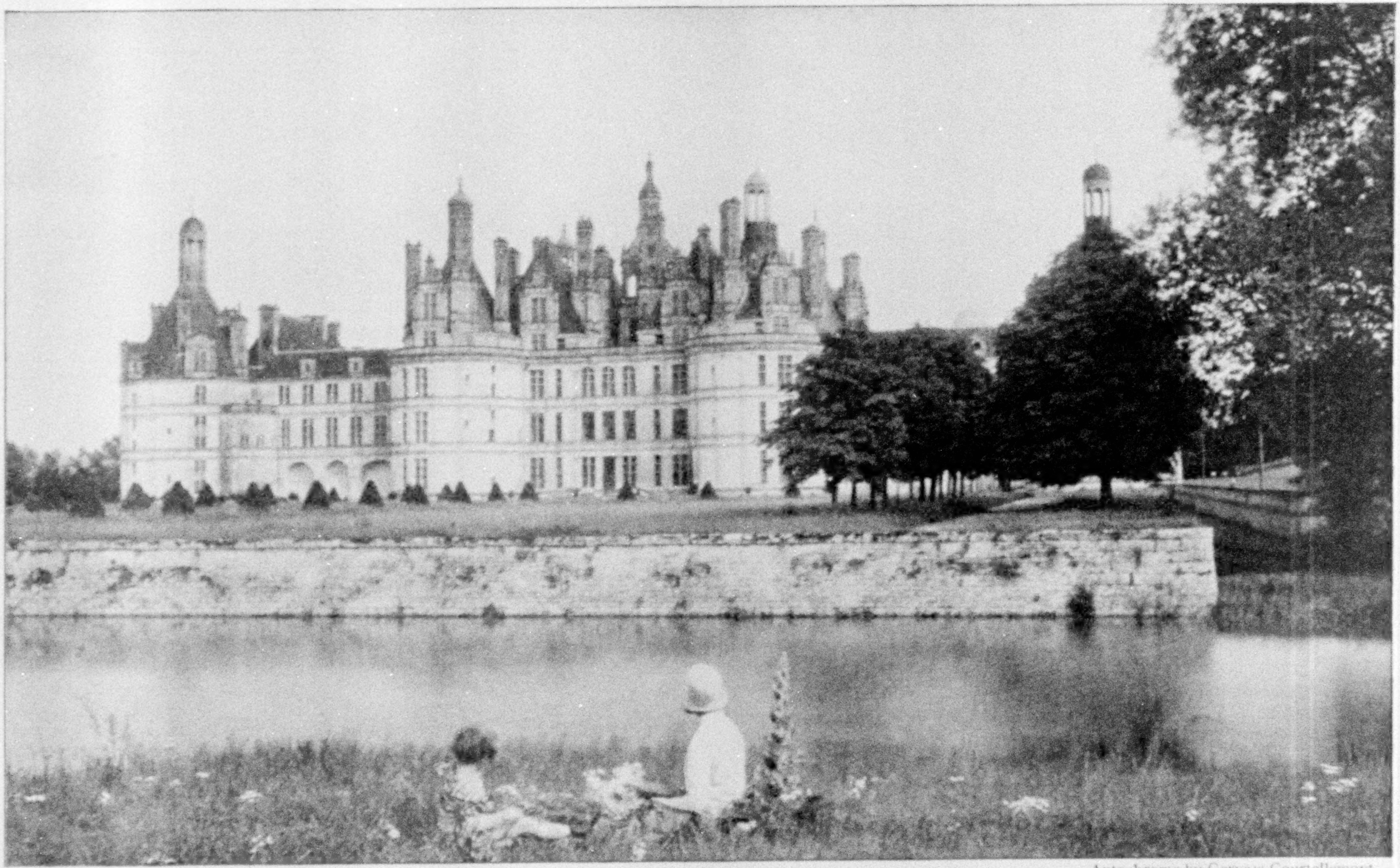
LUYNES CASTLE COMMANDS A MAGNIFICENT SITE OVERLOOKING THE LOIRE

Hardly changed since the days when barons held their sway, this grim, rock-perched fortress could spin many a tale of forays into the fertile valley below. It is one of many in the château country that are accessible from Tours.



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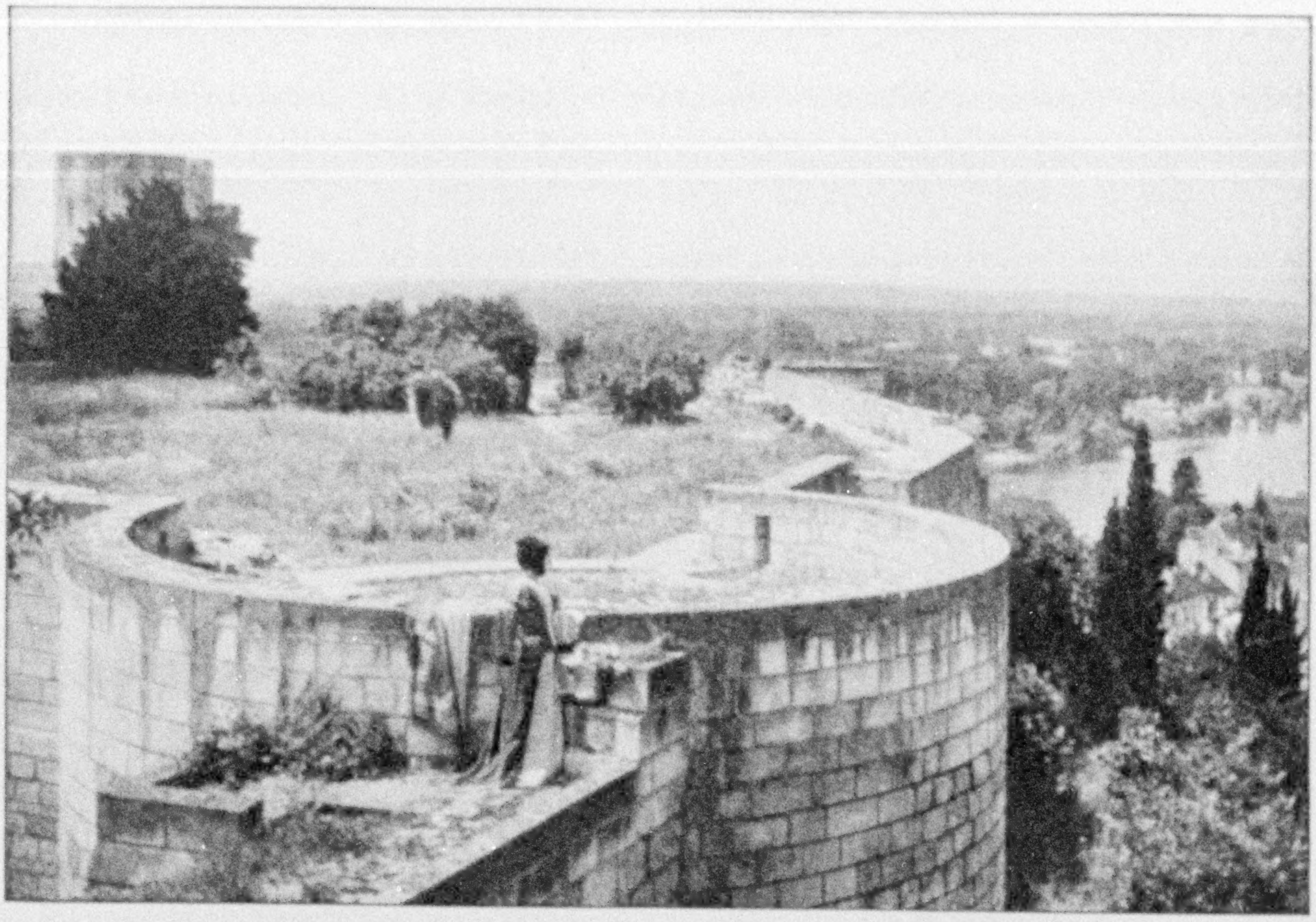
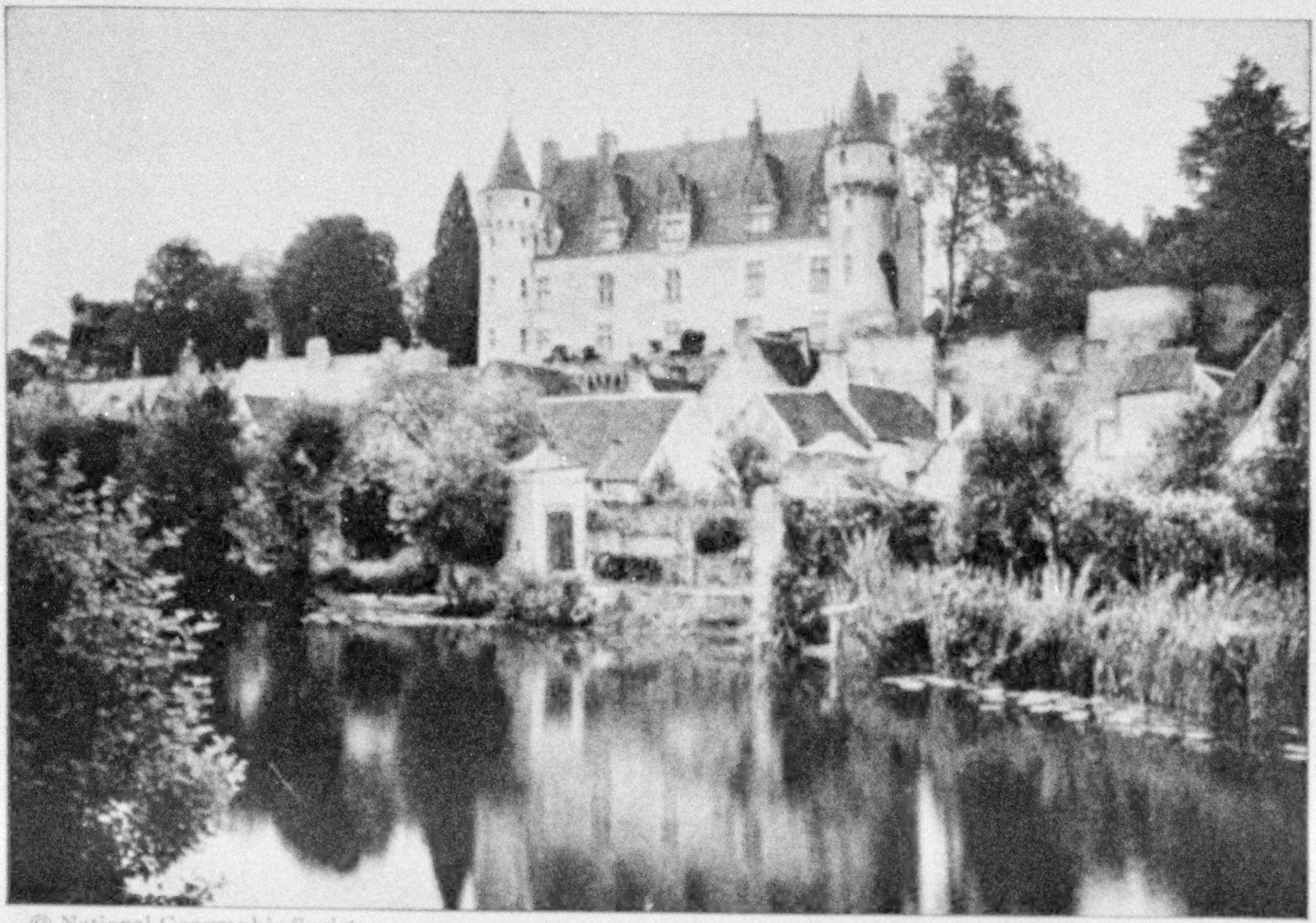
ON "CHAMBORD THE STUPENDOUS" 1,800 MEN TOILED FOR 15 YEARS

The size, fantastic roof, and double-spiraled staircase of this grandiose structure built by Francis I on the Cosson make it noteworthy, but it is remembered chiefly as the place where Francis scratched on a windowpane a famous couplet about the fickleness of woman, and where Louis XIV yawned at a comedy of Molière (see also Color Plate V).



CHINON CHERISHES THE MEMORY OF THE MAID

"I have come from God to help you and your kingdom"—so 17-year-old Joan of Arc told the indolent Charles VII at their first meeting here, in the central château of this triple castle on the Vienne. The young woman in the foreground wears a 15th-century costume.



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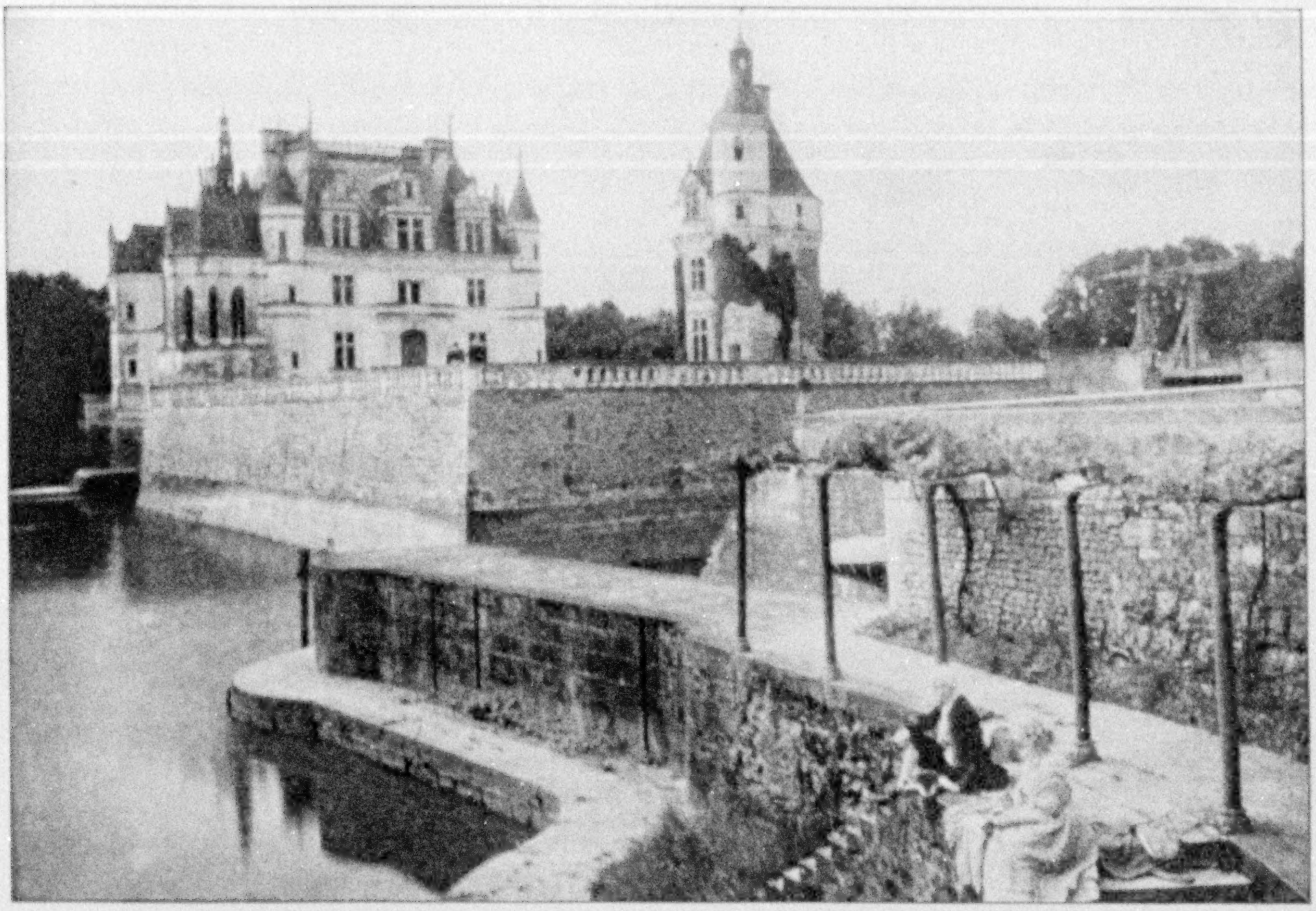
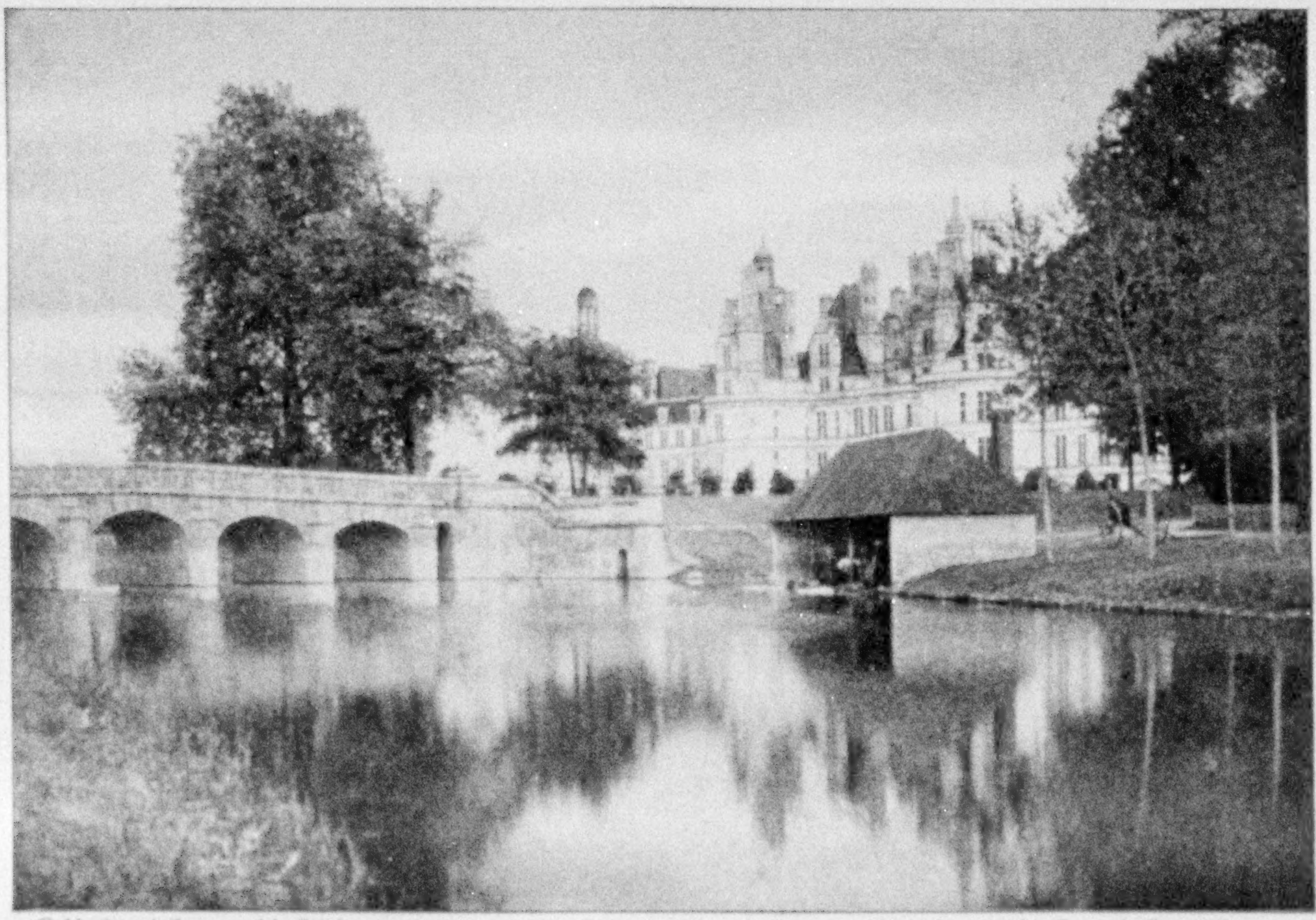
MONTRÉSOR'S CASTLE DREAMS ON BESIDE THE INDROIS

A Polish nobleman now owns this tower-flanked, double-walled structure of the 16th century. It contains a collection of portraits and objects relating to Polish history, including the solid gold plate of the kings of Poland.



BEAUTY AND BRAINS HAVE SHED LUSTER ON CHENONCEAUX

For centuries a pageant of famous names has been connected with this old castle on the Cher. Diana of Poitiers, Catherine de' Medici, Tasso, Mary Queen of Scots, Rousseau, and Voltaire—all played their parts in its history.



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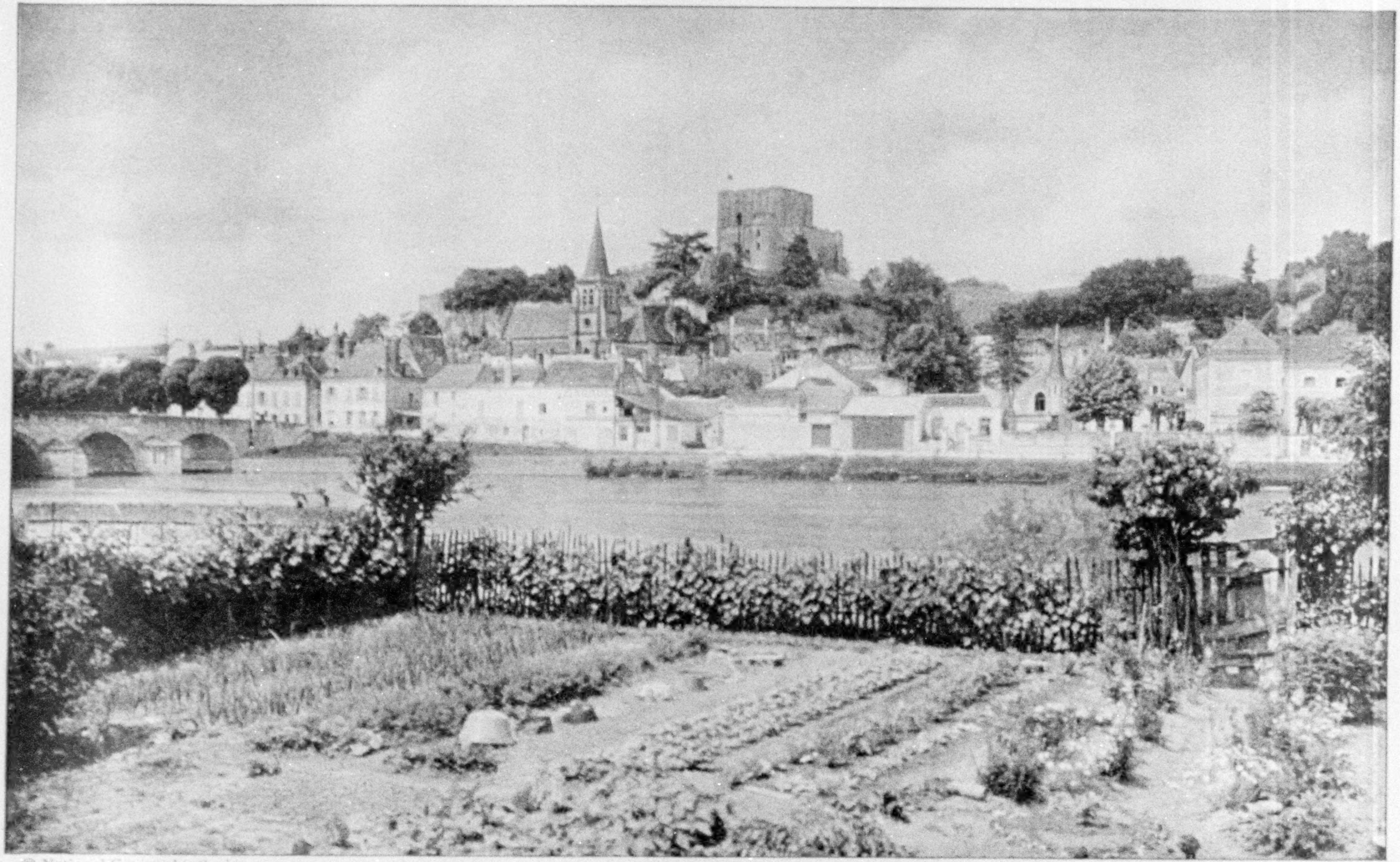
ROYALTY TURNED A HUNTING LODGE INTO A PLEASURE PALACE

To its former occupants, Chambord's great attraction was always the chase, and even to-day the hunting here is a preserve of the President of France. The estate comprises 21 square miles of forest land (see also Color Plate III).



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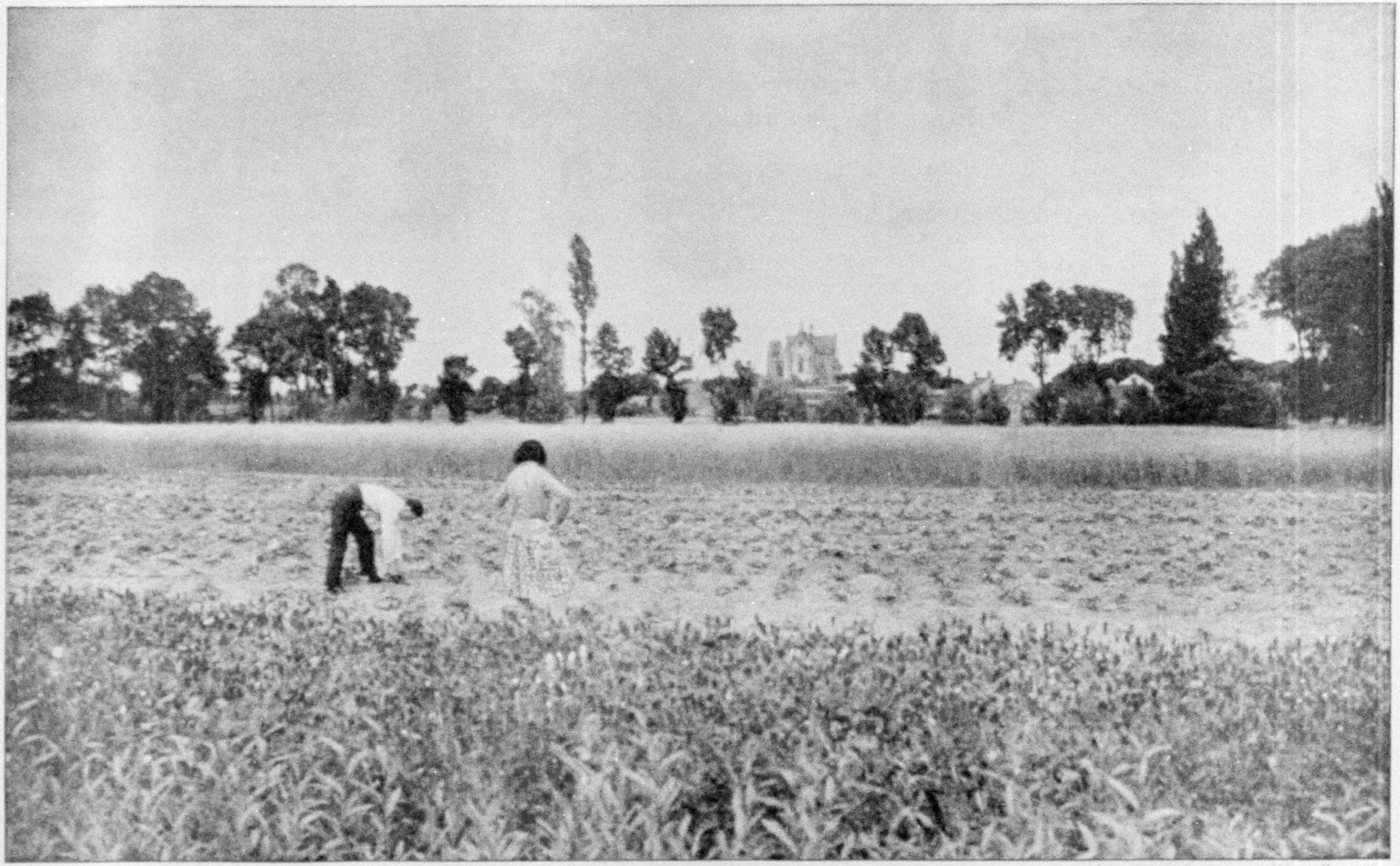
AT MONTRICHARD NINE CENTURIES LOOK DOWN UPON THE PLACID CHER

The keep of the hilltop fortress was the work of Fulk the Black, famous count of Anjou, warrior, Holy Land pilgrim, and castle builder. Other portions of the castle and the outer ramparts are of later date.



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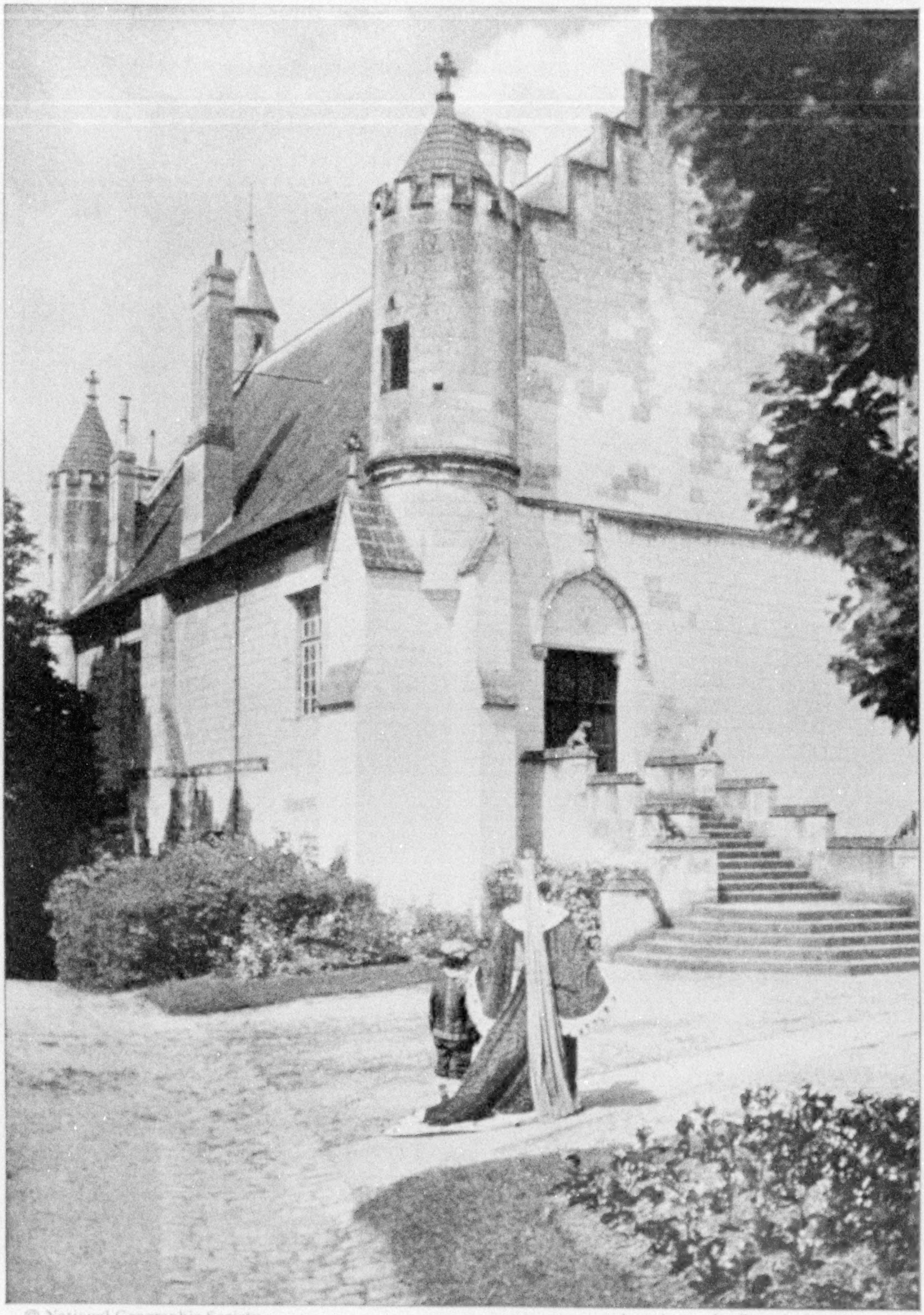
CLÉRY, REBUILT TO FULFILL A ROYAL VOW, DOMINATES A FERTILE LANDSCAPE NEAR ORLÉANS

The tomb of its benefactor, Louis XI, faces an original 13th-century statue of Our Lady of Cléry, a miniature copy of which he wore in his hat. Gallant Dunois, who fought for France with Joan of Arc, is also buried in this church. In the foreground, a farmer weeds his beets, and in the neighboring fields wheat, rye, clover, and vines flourish.



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TO CHARLES VII, THE LOGIS DU ROI WAS OFTEN HOME

In one of the towers of the château at Loches is the tomb of the king's favorite, Agnes Sorel, the "Dame de Beauté." In the foreground, Marie of Anjou, queen of Charles VII, relives in a 20th-century festival celebrating Joan of Arc's appearance here in 1429 with news of the victory at Orléans. Francis I may have planted the chestnut tree at the right.

a sentimental pilgrimage for Joan of Arc's sake. This was the home of Dunois, her gallant associate in arms, who carried on for France so ably after her death (see, also, Color Plate VII). To the château he built a wing having a beautiful exterior staircase which may have suggested the one at Blois.

Between Châteaudun and Tours is Vendôme. The castle is nothing remarkable, but no American can pass through the town without recalling it as the birthplace of Rochambeau, who aided Washington in capturing Yorktown.

### TOURS IS THE HEART OF CHÂTEAU LAND

We come on down to the Loire, to Tours, one of the American Army's chief supply bases during the World War. The men stationed here were in luck when on leave, for Tours is the heart of château land. Castles radiate from it as thick as the petals on a daisy.

One in the immediate environs will not be overlooked by devotees of "Quentin Durward." With Scott, once again the mind's eye turns back to that "delicious summer morning when a youth approached the ford of a small river, near the royal castle of Plessis, whose dark and multiplied battlements rose in the background." Plessis-lès-Tours, where Louis XI, so mean a man, so great a king, held the gloomy court described in the story, was his favorite residence. What is left of the Gothic mansion is now a medical institute.

East from Tours the city's favorite son has immortalized the stretch of countryside along the Loire to Amboise. How Balzac loved his native province, especially this château region!

Of crime-steeped Amboise itself the chief glories include two massive towers with an incline wide and gentle enough in slope for a carriage or automobile to ascend; a delicately carved relief representing the conversion of St. Hubert, patron of hunters, an appropriate ornament, since many a French king loved the chase; and the saint's chapel, containing what are alleged to be the remains of Leonardo da Vinci, whom Francis I brought here as an old and broken man.

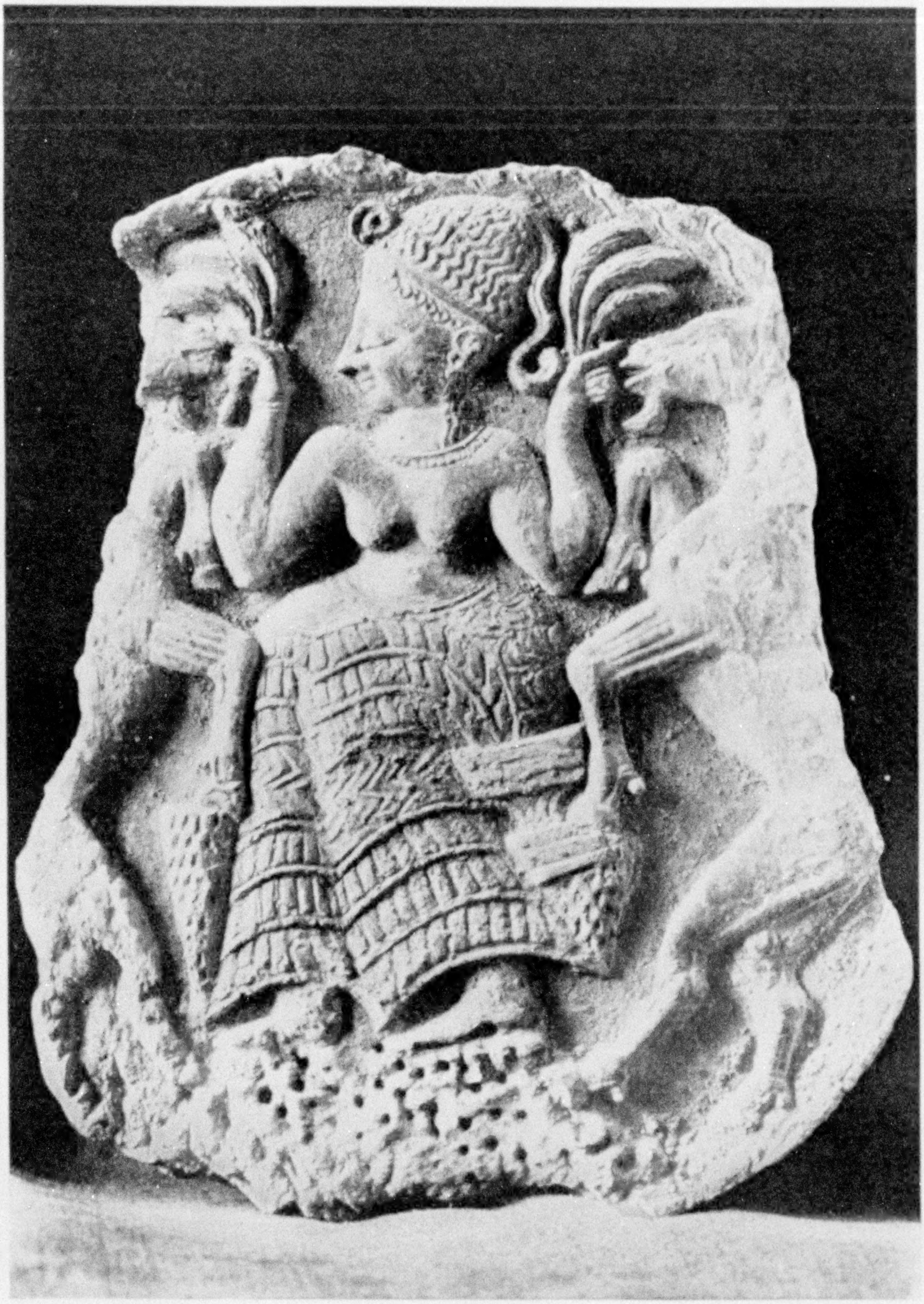
West from Tours is warlike Luynes (see Color Plate II). Many of the houses in the village at its foot are caves hewn from the rock. Farther on is Cinq-Mars-la-Pile. The ruins of this razed castle once belonged to the enemy of Richelieu and Marion Delorme's beloved, as any reader of the stories of Alfred de Vigny and Victor Hugo knows. Some three miles from them is Langeais (see, also, text, page 466), renowned not only for its architecture but also for its period furnishings. Azay-le-Rideau, too, is in this vicinity, south of the Loire; then the magic word "Chinon" conjures up visions of the triple castle near at hand, proudly upreared "on its ancient rock." Joan of Arc, who here stepped on History's stage (see Color Plate IV), and Rabelais, who was born in or near the town, hold the imagination enthralled.

### A PLACE OF PILGRIMAGE FOR STUDENTS AND ARTISTS

With such delights in store, it is no wonder that, even for the visitor limited as to time, a glimpse of the château country is an essential of nearly every traveler's sojourn in France. Especially do American students and art lovers, scholars, or mere pilgrims for pleasure, find the trip almost as great a feature of their tour abroad as a visit to London, Stratford, Oxford, the Lake Country, and Paris itself, or to the Nation's Capital "back home."

Yet no mention has been made of Cheverny, near Chambord, many of whose furnishings and treasures of the pre-Versailles period France regards as among the best she possesses of that time; of Ussé, near Azay-le-Rideau, improved by Vauban, the fortress-builder; of Chaumont, east of Blois, a delightful castle which Catherine de' Medici exchanged with Diana of Poitiers for Chenonceaux (see Color Plate V); nor of—but the end must come somewhere.

A French lover of château land has summed it all up: "The Loire is a queen, and kings have loved it. On its azure tresses royal rivals have placed castles carved like unto jewels; and of these wondrous gems, the river forms its crown."



Photograph from Prof. F. A. Schaeffer

A GODDESS OF FERTILITY OF THE AGE OF BRONZE

An exquisite relief in ivory, the finest that has come down from 1300 B. C., formed the lid of what had probably been a queen's jewel case. It was recently unearthed in a royal tomb at Ras Shamra, in the State of the Alaouites, in Syria, and is now preserved in the Louvre (see text, page 506).

# A NEW ALPHABET OF THE ANCIENTS IS UNEARTHED

## An Inconspicuous Mound in Northern Syria Yields Archeological Treasures of Far-reaching Significance

By F. A. Schaeffer

*Leader of the Ras Shamra Expedition, Curator of the Musée Préhistorique et Gallo-Romain, Strasbourg*

FROM a 65-foot hill overgrown with aromatic fennel and rising from the sands of the northern coast of Syria, opposite the most easterly cape of the island of Cyprus, a French archeological expedition has recently brought to light tablets inscribed with an alphabet which was conceived by man more than three thousand years ago.

In addition to the tablets written in an as yet undeciphered language, many superb relics of a civilization which flourished during the second millennium before the Christian Era have been unearthed.

But, before telling of the discovery of these treasures, let me first introduce the reader to the region where they were found and to the people who live there.

When I told my friends of my intention to undertake excavations in the State of the Alaouites, I was greeted with blank astonishment. Nobody knew where it was. No gazetteer reference could be found to it, and even the newest atlases gave no information.

### ONE OF THE POST-WAR STATES OF THE NEAR EAST

After the World War, when French cavalry were searching Palestine and Syria for dispersed Turkish and German troops, they entered the country of the Ansariyeh (also called the Nosairis), some sixty miles north of Beyrouth. Here lived several important tribes which had refused to provide soldiers for the Turks during the war.

In 1920 the "Territory of the Alaouites" was formed by the Supreme Council of the Allies and, with other Syrian units, put under French mandate. The League of Nations approved. At the end of 1924, when the Syrian Federation was dissolved, the territory became a separate "State."

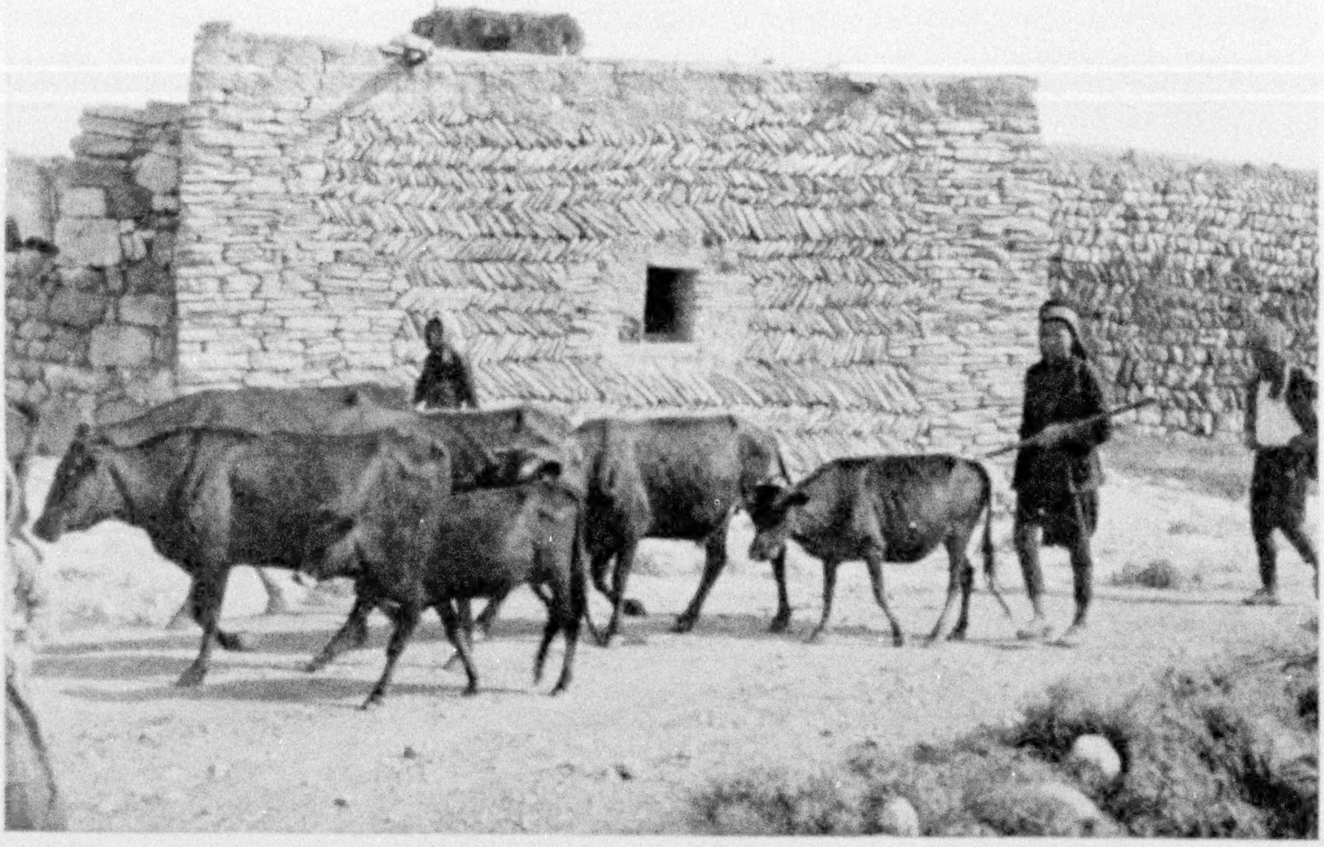
The new State covers 2,510 square miles (about half the size of Connecticut). It is bounded on the south by the Syrian State of Liban (Greater Lebanon), on the east by the partly swampy Orontes Valley, on the north by the Plain of Antakieh (Antioch), on the west by the Mediterranean. Its coast measures 93 miles.

Coming from the south by land, where there is hardly enough room for the road between the Lebanon Mountains and the sea, the traveler crosses the Alaouite boundary and faces a vast plain. The mountains recede from the coast toward the east, leaving space for fields and pastures. On the near-by slopes rise castles of the Crusaders (see, also, illustrations, pages 490 and 493).

Geographical differences between Alaouite territory and the Lebanon region shaped the destinies of the peoples living there. Industry, especially commerce, flourishes in the Lebanon. Everybody has something to sell, if only the few sugar candies which are carried on the head in small glass cases through the streets of Beyrouth. Export trade also occupies many thousands. Indeed, the country crowds the Syrian, so to speak, out to sea. Even Herodotus speaks of the business efficiency of the Syrians and calls them the shrewdest traders in the entire Orient. And that means something!

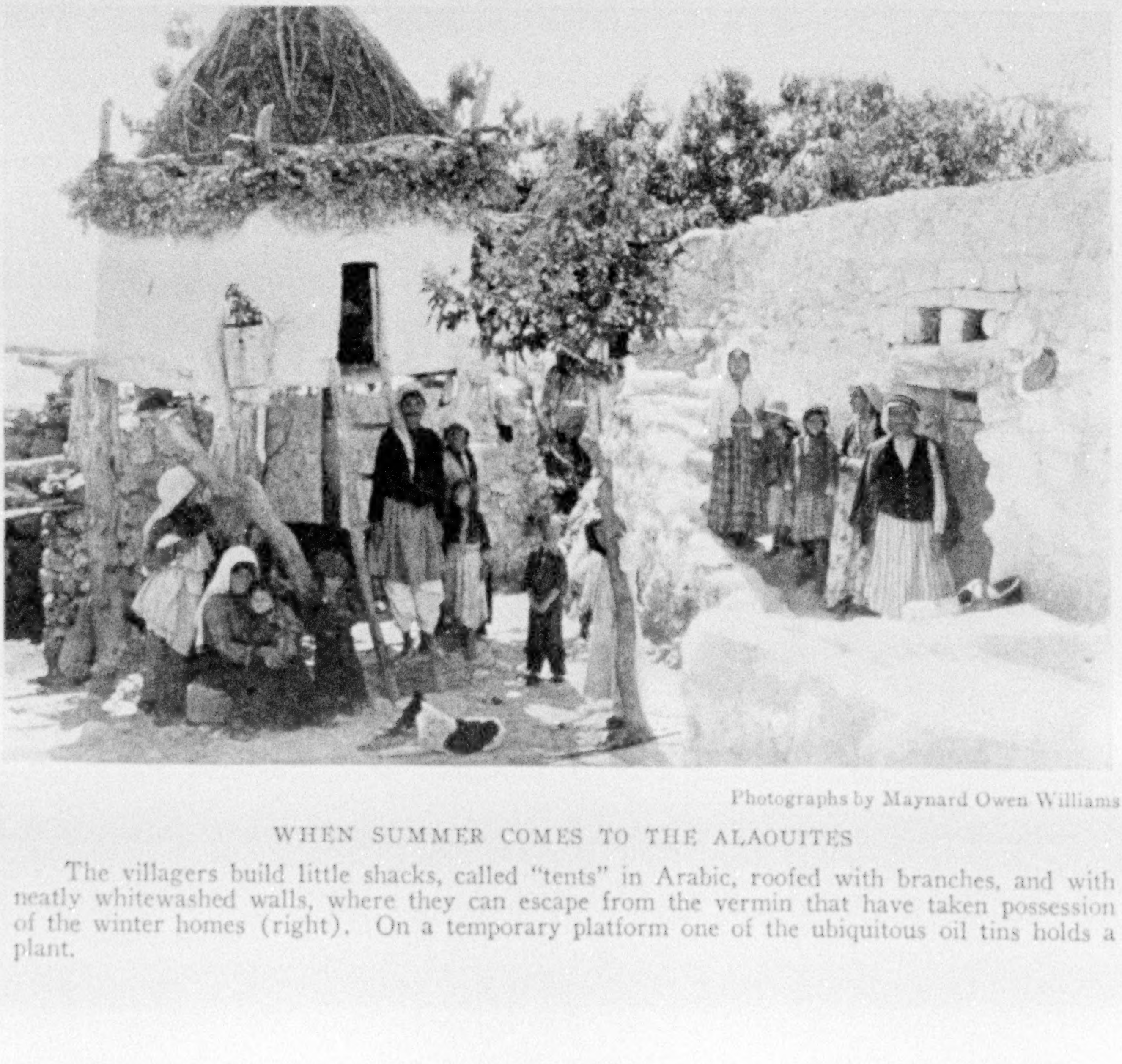
### A DANGEROUS COUNTRY TO VISIT

The Alaouites, on the other hand, are farmers and cattle-raisers. But before the World War certain mountain dwellers of the State were dreaded as robbers and bandits, who from their hidden, densely wooded valleys defied all explorers of their



GEOLOGY PLAYS ARCHITECT IN NORTH SYRIA

The peculiar stratified stone found between Tartous and Safita has made this a favorite type of wall.



Photographs by Maynard Owen Williams

WHEN SUMMER COMES TO THE ALAOUITES

The villagers build little shacks, called "tents" in Arabic, roofed with branches, and with neatly whitewashed walls, where they can escape from the vermin that have taken possession of the winter homes (right). On a temporary platform one of the ubiquitous oil tins holds a plant.

Photograph from Prof. F. A. Schaeffer

THE ALAOUITE'S WINTER HOME IS NOT A THING OF BEAUTY

These square, one-room structures are invariably overrun with vermin, so in summer the family erects a temporary home (see, also, illustration, opposite page). Grain is stored in the immense wicker baskets.

country. Particularly famous are the Ismaïlieh, or Hashishin (Assassins), who in the early days of their history were addicted to the use of hashish. From their name the word "assassin" is derived.

Even in 1914 it was dangerous to venture north of Tripoli, into the land of the Alaouites. There were no modern roads. The camel's back served for transport; travelers could make headway only on horseback.

What a contrast in the spring of 1929! We rode along the coast to the north on a wonderful automobile road, with curves like those of a race track and splendid bridges spanning the rivers and brooks that hasten to the sea. Syrian chauffeurs speed north and south along this highway. Nearly all the cars seen are of American manufacture, because the American automobile industry grants the long-term credits which the Syrians request in order first to earn their cash installments. In this way they never stop buying cars, for when the original automobile is finally paid for, it is usually worn out and a new one must replace it. The old rattletraps are sold for travel inland and on caravan trails to the east.

The sudden rise of the State of the Alaouites is based upon agriculture. The grain fields, the olive and mulberry

Photograph by Maynard Owen Williams

A SYRIAN WOMAN AND HER CHILD

She has completed her task of molding into cakes and stacking dung fuel for winter (see, also, text, page 485).

groves, and lately the cotton fields, too, yield rich harvests, and by installing irrigation systems the French Government is steadily redeeming additional acres for agricultural purposes.

Latakieh, to which 1918 travelers' guides referred as dirty, impoverished, and unhealthy, now has boulevards, a casino, a city park, hotels with running water, a public library, hospitals, and nurseries. The small European colony is very happy there and the Governor's home is the center of social life.

The Governor occupies the former Turkish palace. The old building is unchanged, but in its office is more life than in past days. As in the times of the Sultan, swallows dart through the paneless windows and make their home in corridors, even attaching some of their nests to the framework of the office doors. Nobody disturbs them and the palace resounds with their twitterings.

It is only natural that after such a rapid development the municipal centers, like Latakieh, are far ahead of the rural sections. This fact was brought home to me when I tried to get my expedition beyond Latakieh by automobile and came to a standstill not far from the city, despite the staunchness of my American-made cars. I had to return and make up a

Photograph by Maynard Owen Williams

THE FIRST BRIDGE ON AN UNFINISHED HIGHWAY BETWEEN LATAKIEH AND ALEP (ALEPPO)

The French are doing much to open up their Syrian mandate with good roads. This one was built in 1927.

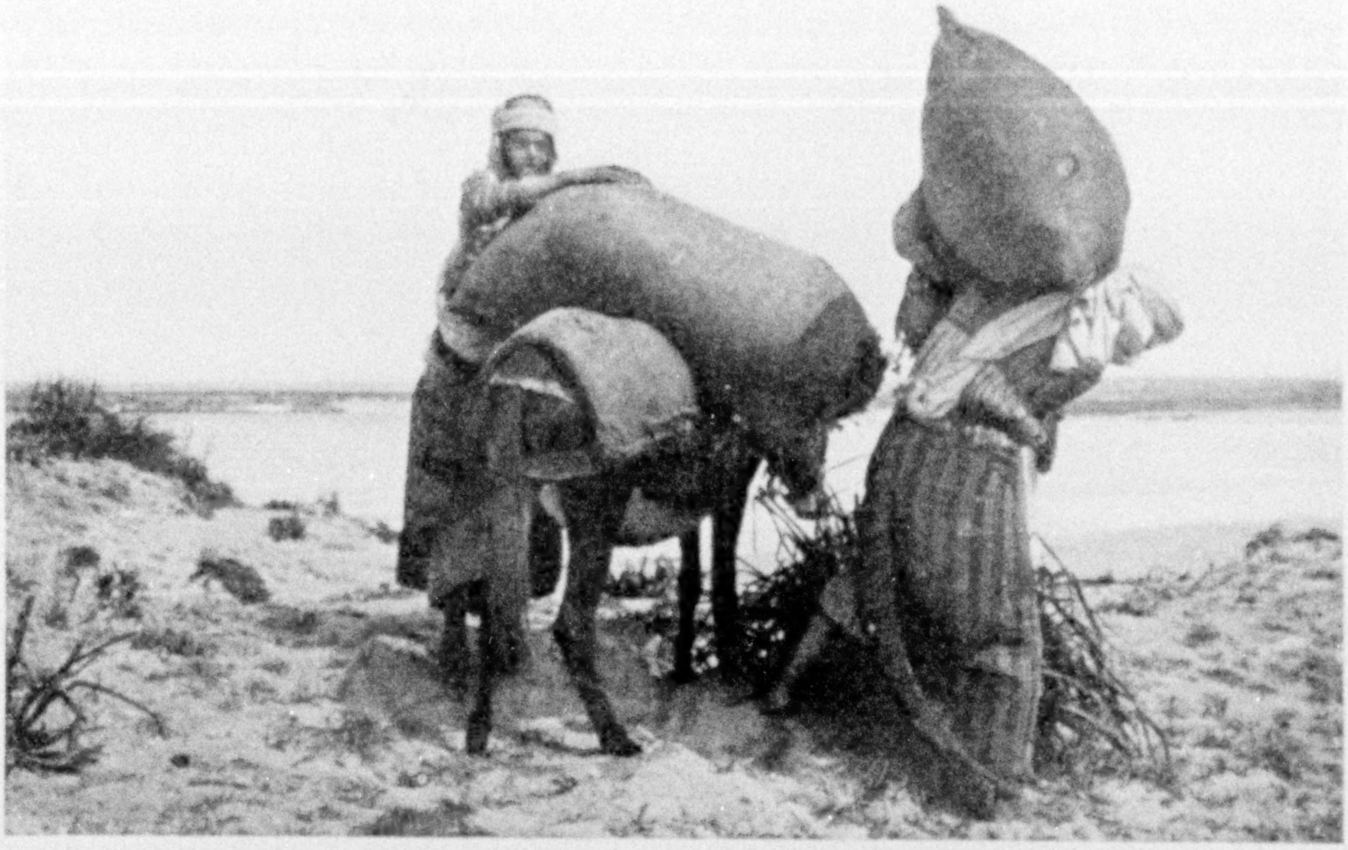
camel caravan to carry my boxes of provisions, tents, and cases of instruments (see page 489).

At the end of March I left Latakieh for the second time. For protection a few Syrian horsemen accompanied the caravan and a detachment of 20 soldiers followed us a few hours later.

The road runs at first along the coast through desertlike country covered with dunes; but where a waterway speeds to the sea flourishing gardens spring up, with lemons and oranges dangling from the trees. These gardens are owned by Mohammedans, for whom the Alaouites labor under a system approaching serfdom, only a small percentage of the harvest falling to their share. The French administration endeavors to better conditions; but here, as in most other parts of the Orient, social reform comes slowly.

## BIBLICAL SCENES IN THE 20TH CENTURY

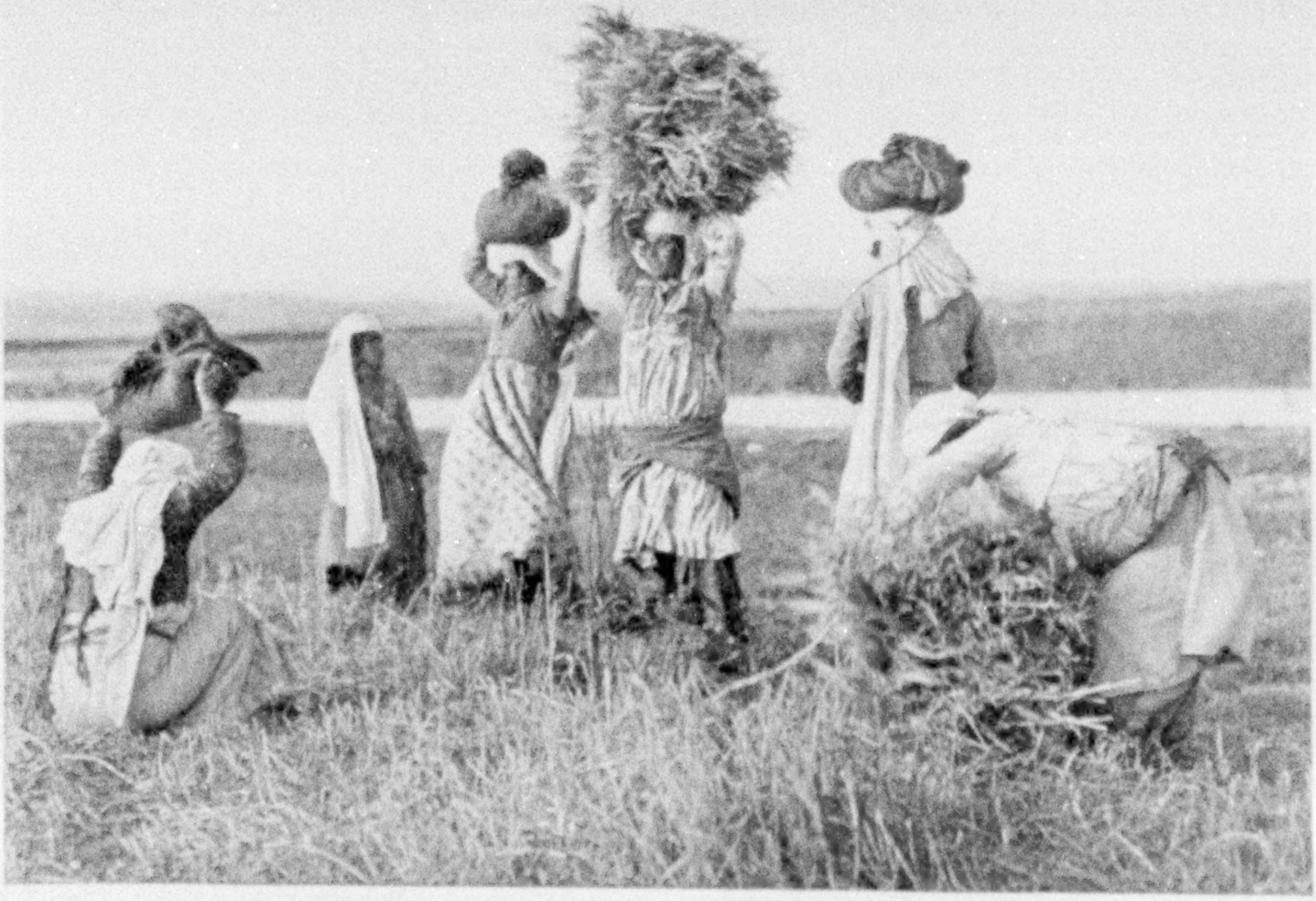
Primitive conditions still exist in the villages. Men and cattle live together in one room. When a woman gives birth to a child, she makes up a bed of straw for the babe, just as women used to do at the dawn of the Christian Era. The picture we often admired as children, in which



Photograph from Prof. F. A. Schaeffer

WIVES' HANDS LIGHTEN THE ALAOUITE HUSBAND'S TASKS

The Alaouite's religion permits him to have seven wives. A multiplicity of helpmates enables him to spend more time sitting cross-legged on his flat roof, smoking.



Photograph by Maynard Owen Williams

ALAOUITE WOMEN RESUME THEIR HEAD BURDENS AFTER A ROADSIDE REST

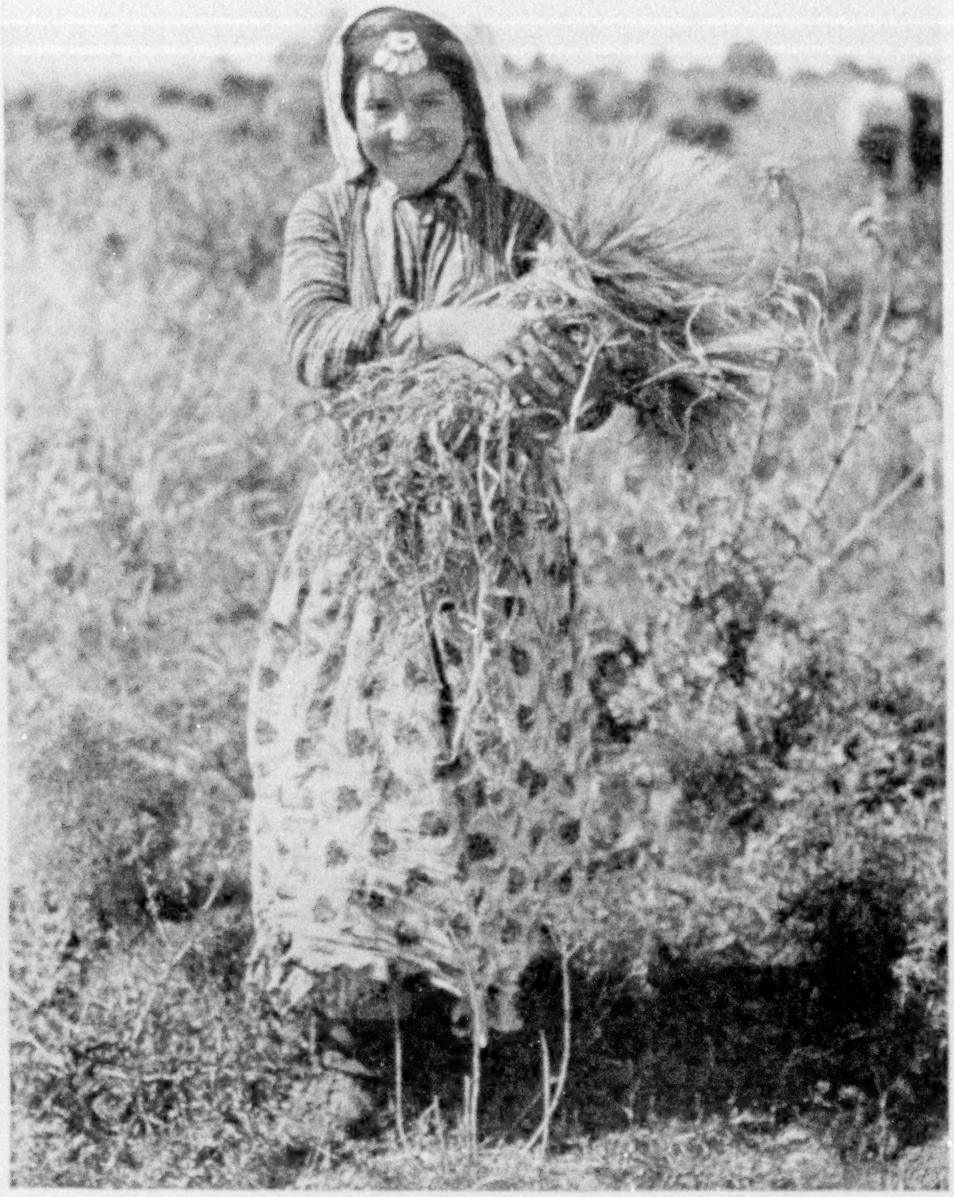
Wheat, barley, maize, beans, and lentils, apricots, peaches, oranges, lemons, plums, pomegranates, figs, olives, and mulberries are the principal products of this country. Cotton is also cultivated, and Latakieh tobacco is famous in the Near East.

gentle-looking cows and lambs are gazing at the new-born Christ Child in the stable at Bethlehem, is a vivid reality here.

Forty days before and the same length of time after her baby is born, the mother is considered unclean; but she is not exempt from work during this time. It often happens that she returns from the fields in the forenoon to give birth to her child at home—it is considered fatal to be born under the open sky—and in the afternoon she is back in the fields toiling under the hot sun.

Often the woman works in the broiling noonday heat while the man, muffled in white garments or even shaded with an umbrella, sits near by and looks on.

Frequently my caravan met heavily laden women and entire families with the man riding the donkey, and the wife, with her child in her arms or tied in a shawl on her back, walking beside him.



Photograph by Maynard Owen Williams

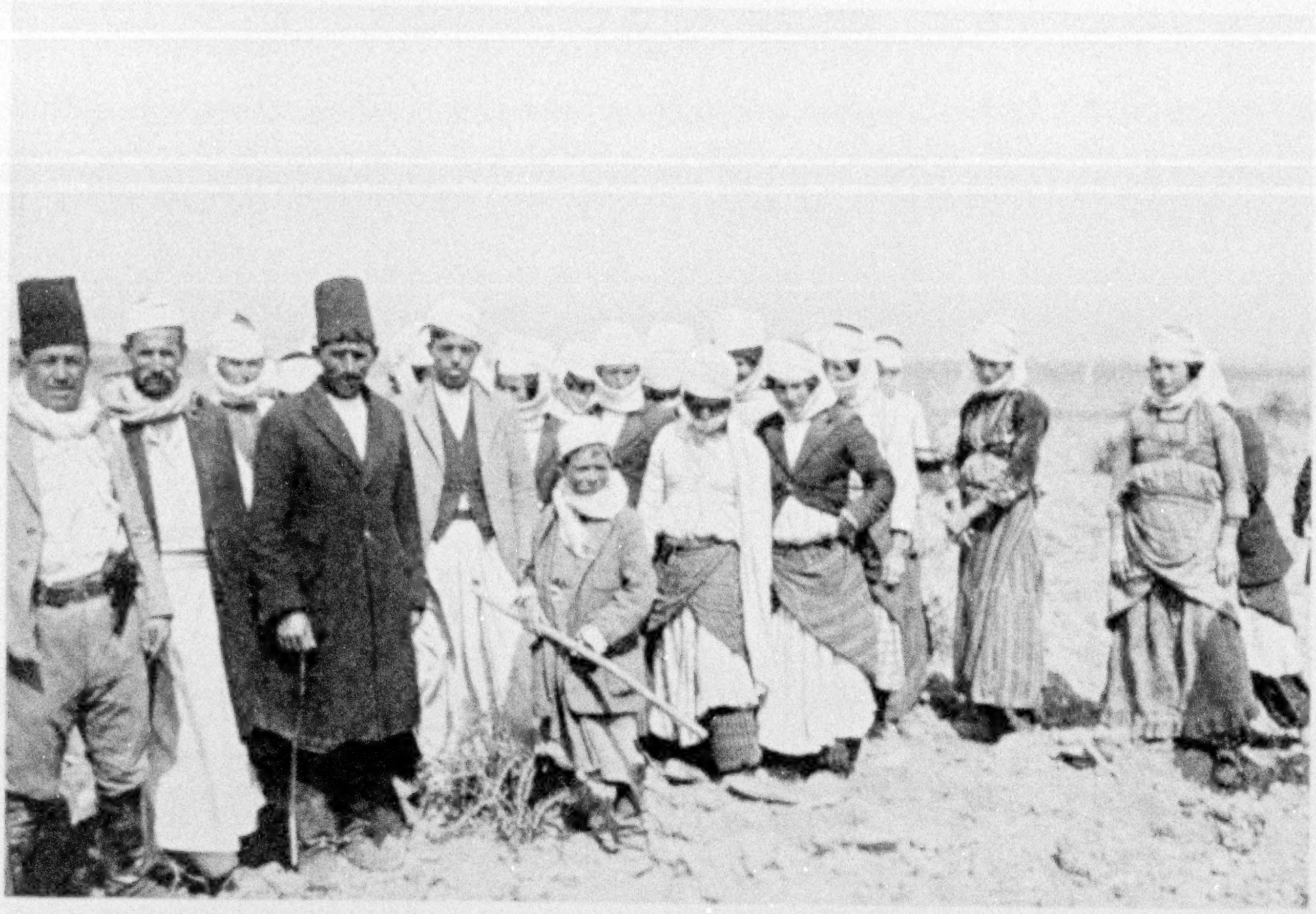
AN ALAOUITE BELLE

The women wear bright prints, scarlet trousers like long bloomers, and a small cluster of coins in the middle of the forehead. This girl's white veil covers a purple and gold headcloth.

The Alaouite does not marry, as we understand the word. He buys as many wives as he can afford (his religion permits him seven) to work for him and to bless him with children—sons on whom to fix his pride and daughters who will work for him and whom he may later sell for much money. The woman has no social rank whatsoever. In the opinion of the men of that region, she, like the animals of the field, does not possess a soul and therefore she does not participate in the strange religion of her people.

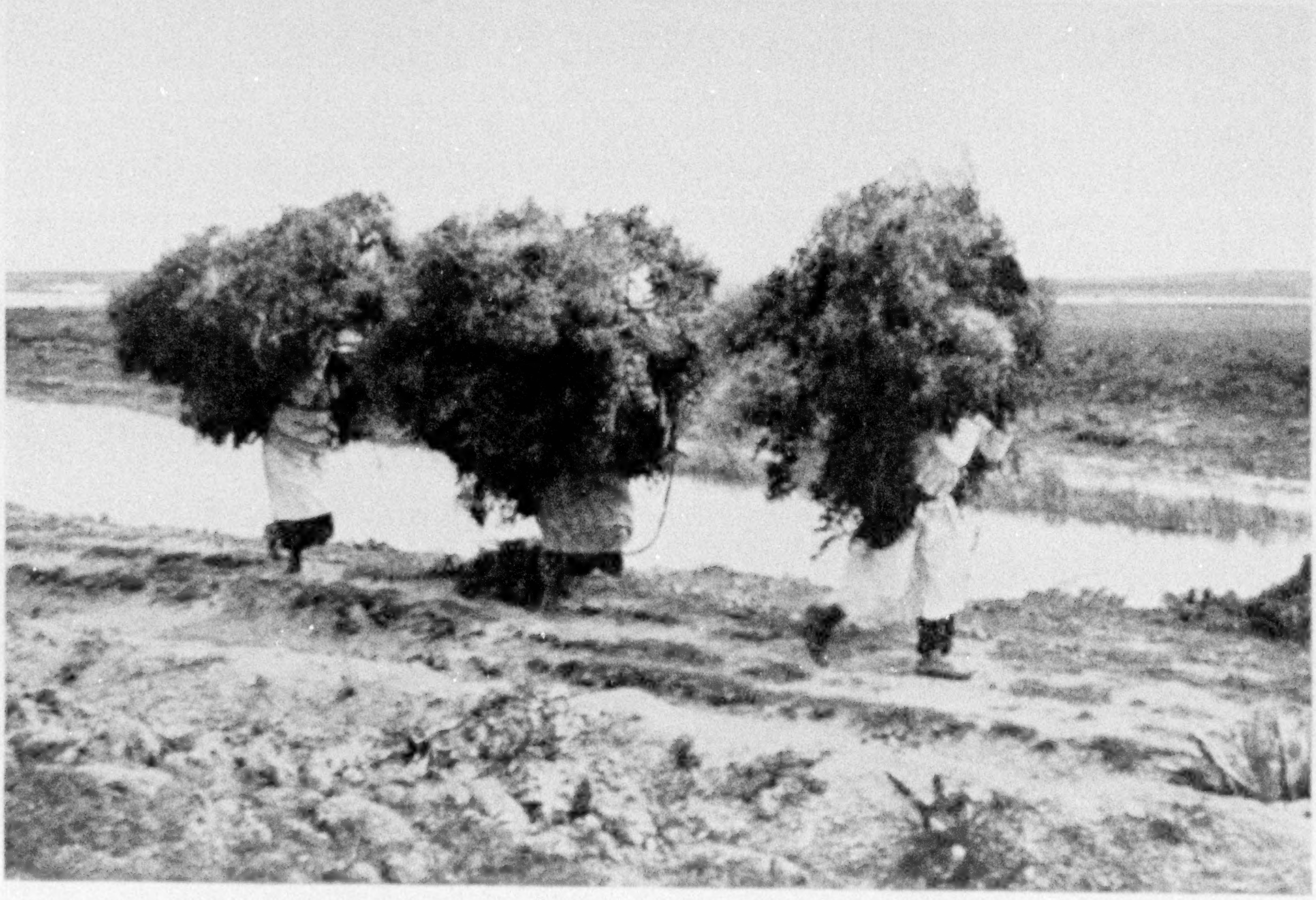
The youths must wait until they are full grown before being taught the mysteries of their religion by the chief of the tribe or by the oldest man of the village. One of the first vows which they must make in this connection is to be absolutely silent in regard to the teachings of this faith; therefore, most phases of the religion of the followers of Ali have been kept secret to this day. Partly by chance, however, I learned something about it.

On one occasion when I wished to rest my caravan and sought the shade of an immense old olive tree, my Syrian Alaouite interpreter told me that I would offend the natives, for the tree in question was sacred. Therefore we continued farther along and rested on the outskirts of the village.



A MOHAMMEDAN LANDOWNER (EXTREME LEFT) WITH HIS ALAOUITE FIELD HANDS

Very little of harvest falls to the share of the workers (see, also, text, page 481).



Photographs from Prof. F. A. Schaeffer

THE ALAOUITE WOMAN IS A CHEERFUL WORKER

Though they perform most of the tasks in home and field, are treated like beasts of burden, and excluded from religious rites, they appear contented with their lot.

As sacred as the old olive tree may have been, it was nevertheless used for drying manure cakes, with which its trunk was entirely covered. I saw also several barefooted women, with their clothing pulled up, stamping around in a pit where camel and cattle manure was being mixed with bits of straw. After this mass was well kneaded, the women made flat cakes of it with their hands and pasted these on the walls of the huts or on tree trunks. The peatlike cakes serve as fuel in winter.

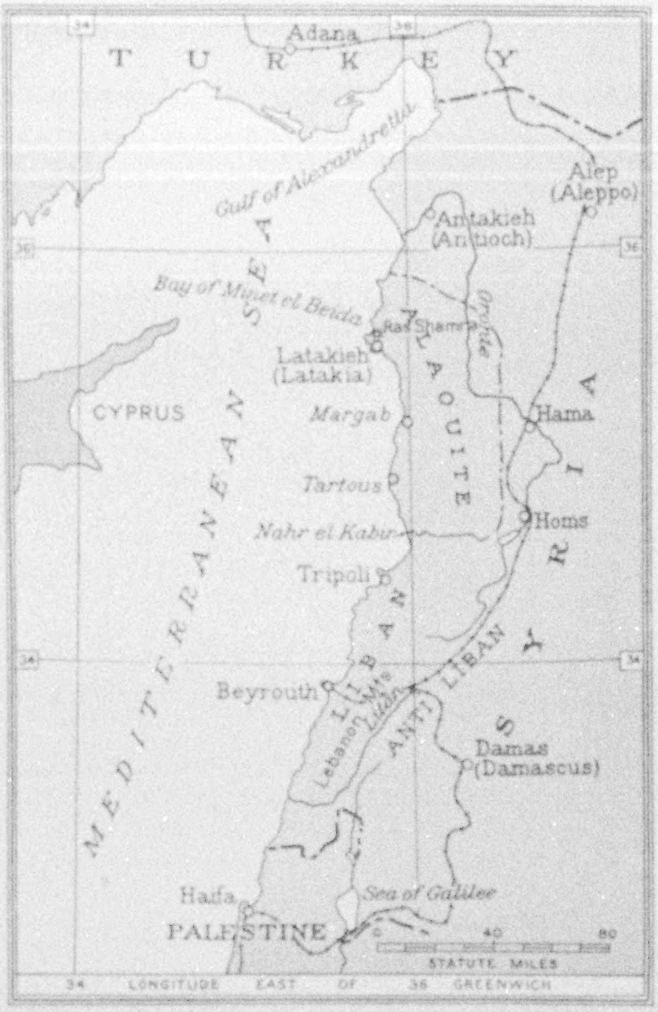
I soon discontinued my study of the fuel of the Alaouites, for the odor was unbearable.

A few hours later we reached another village of the Alaouites, beautifully situated in the midst of banana, orange, and mulberry trees. Here we saw an altar, a rectangular, whitewashed block of clay as wide and high as a small table, surrounded by a low wall. On the altar stood a long row of small plates on which perfumed charcoal smoldered. The whitish smoke clung to the ground and could be seen from afar (see page 487).

Through my interpreter I asked a native about the altar. He pretended to know nothing about it. Furthermore, I was made to understand that the inquiry on my part was not polite, as questions concerning the Alaouite religion are prohibited; but later I observed that on certain days every woman of the village placed on the altar a small plate containing incense. Under the altar rested the remains of a saint, the skeleton of a village priest, or that of an elder of the tribe.

The last Alaouite village through which we passed, nestled at the foot of a large hill where, later on, we were to make important archeological discoveries. On the hill stood a sacred inclosure surrounding an altar, exactly the same type as those found at the sanctuaries of the Phœnicians. The altar, above which spread the branches of an old holly tree, was a whitewashed, rectangular block of clay with two elevations shaped something like phalli. Around one was wrapped a narrow strip of cloth, to symbolize the umbilical cord and assure the safe birth of a child. Upon this altar stood a few small plates left from the last smoke offering.

From an inhabitant of the village, whose confidence I gained, I learned that a priest rested under this altar, and that the natives come from great distances to make a pilgrimage to his tomb. They believe that the souls of the dead repair first to the stars, but that people who do evil during their lifetime must return to earth in the form of an animal. Perhaps this is why the Alaouites treat their donkeys, camels, and horses so cruelly.



Drawn by A. H. Bumstead

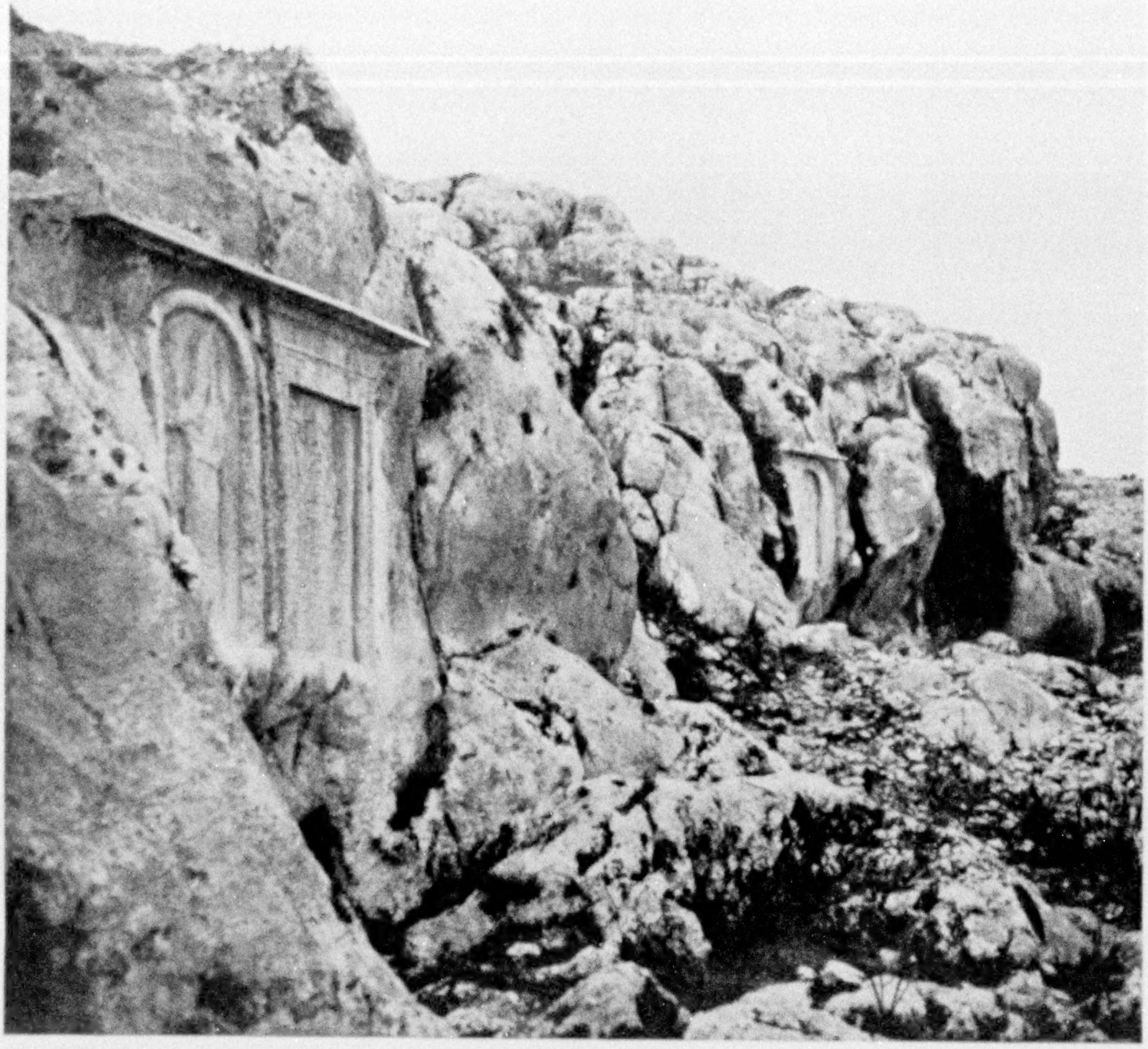
WHERE THE NEW ALPHABET WAS FOUND

In the Syrian State of the Alaouites, on a hill opposite the eastern extremity of Cyprus, a French archeological expedition under the leadership of the author made its notable finds.

## AGA KHAN ABANDONS HIS GOLDEN THRONE

The religious head of the Alaouites is Aga Khan III. He receives a certain percentage of the total income of each of his numerous followers among various sects.

He enjoys life. His official residence is in Bombay, upon the carpet of which pilgrims press their kisses, but he has abandoned his golden throne, married a French girl, and lives in Paris and Deauville. Every year he writes out a creed by which his followers swear. Frequently I saw his booklet hanging in a little bag



Photograph from Prof. F. A. Schaeffer

ON THE ROCK OF NAHR EL KELB CONQUERORS, FROM PHARAOHS DOWN TO MODERN GENERALS, HAVE LEFT THEIR MARK

The gorge through which Dog River rushes down to the sea a little north of Beyrouth was a famous pass in ancient days, and over the road which climbs it marched many an embattled host, leaving as mementos of their presence here numerous rock-cut inscriptions and sculptures.

over the beds of the Alaouites. One should not touch it or inquire as to its contents, lest one's best friend become an enemy.

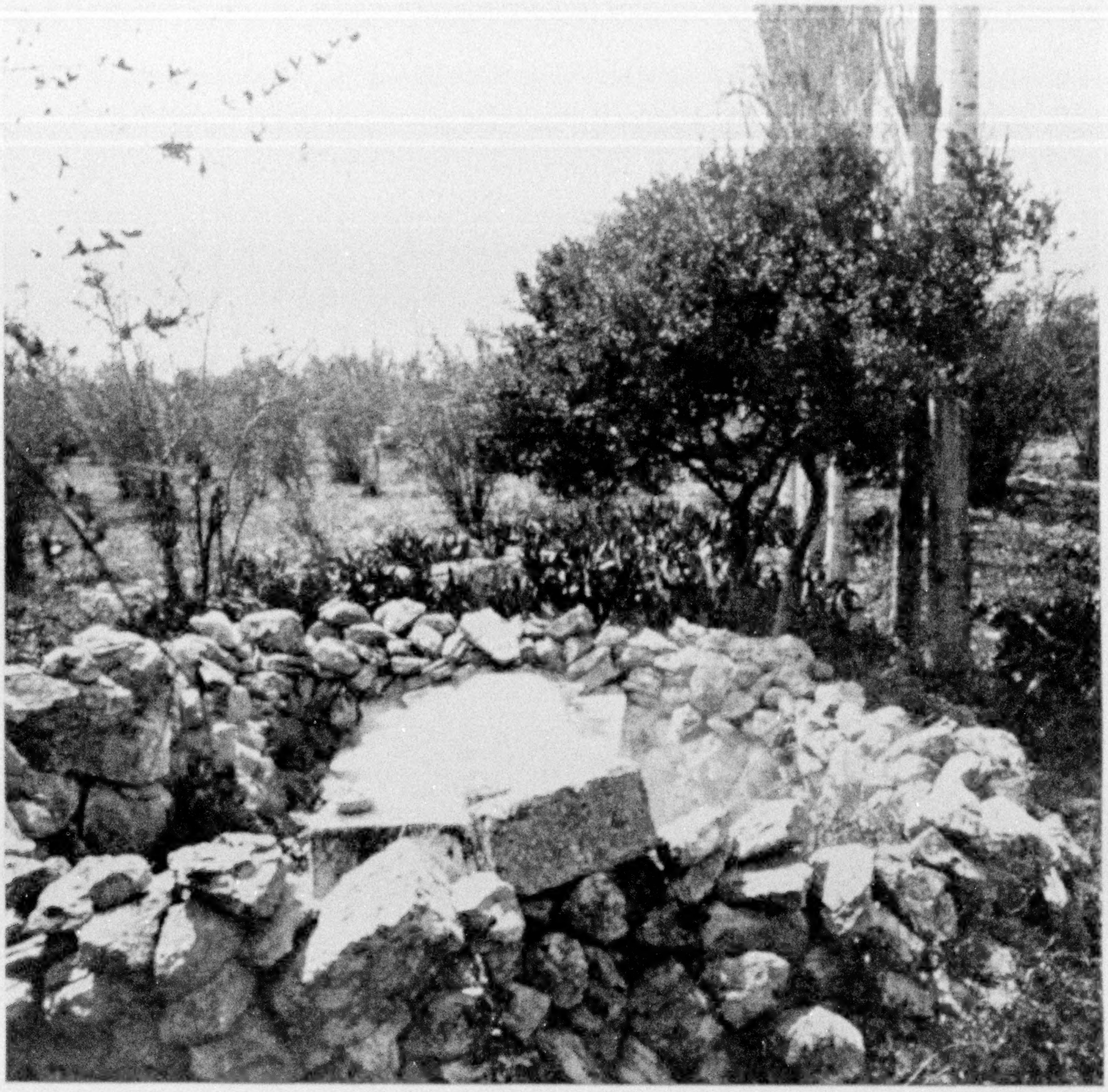
We had a beautiful view from the top of the hill upon which stands the little sanctuary. To the north lay the Mediterranean Sea and the Bay of Minet-el-Beida, our first goal.

Minet-el-Beida means "White Harbor," deriving its name from the glaring calcareous rocks that protect the entrance to the harbor. The sandy beach over which the waves glide offers a good landing place for small boats, but to-day Minet-el-Beida is deserted by shipping. Only at night do Syrian fishermen row out into the bay to cast their nets into the lukewarm water (see page 488).

Ages ago, when boats were occasionally beached at night, Minet-el-Beida must have been an excellent harbor. Even the ancient Greeks seem to have known of it, for one of their travel books speaks of "Leucos Limen," in northern Syria, the equivalent Greek name for the Arabic Minet-el-Beida.

### MINET-EL-BEIDA LINKED EAST AND WEST

But that which gave White Harbor outstanding importance at the dawn of history was its favorable geographic loca-



Photograph from Prof. F. A. Schaeffer

PERFUMED CHARCOAL SMOLDERS ON AN ALAOUITE ALTAR

The religion of the Alaouites is something of a mystery, for "an Alaouite," according to a Levantine proverb, "never talks." Nominally, as their name implies, they are followers of Ali, Mohammed's son-in-law, but their beliefs appear to be a mixture of Mohammedanism, Christianity, and Syrophœnician forms of Sabæanism—sun, moon, and star worship. This open-air altar is a whitewashed block of clay surrounded by a low wall. On it lies a row of plates containing burning charcoal (see, also, text, page 485).

tion. The old seafarers always sailed along the coast to avoid the open sea, except when they were forced to brave it. Greek mariners, after calling at the island of Cyprus, came to the White Harbor, which became one of the most important stations on the greatest of all roads of civilization, linking the culture of the West with that of Mesopotamia.

The White Harbor was also of supreme importance in the lively exchange of goods between Assyria and Egypt. It would have been strange if the traveled Phœnicians, whom we describe as "the Englishmen of antiquity," had not taken advantage of Minet-el-Beida's situation. Experts as they were in harbor construction on Mediterranean shores—Gibraltar, Carthage, Marseille, and other famous ports bore witness to this fact—the Phœnicians had to acknowledge the importance of Minet-el-Beida, for the Cretans had already discovered it.

In the Bronze Age, when iron was unknown in the manufacture of weapons, Cyprus supplied a large part of the world with copper. Its mines were indispensable to the centers of civilization on the Nile

Photograph from Prof. F. A. Schaeffer

THE NOW PEACEFUL SHORES OF MINET-EL-BEIDA RANG TO THE NOISE AND BUSTLE OF A WORLD SEAPORT 3,000 YEARS AGO

White Harbor, named for the glaring rocks at its entrance, was once a geographic crossroad linking Mediterranean centers of commerce and culture with Mesopotamia (see, also, text, page 486). The bay is eight miles north of Latakieh.

and the Euphrates. But ships laden with copper ore had to stop at Minet-el-Beida to unload cargo destined for Mesopotamia and Babylonia, because this was the nearest harbor on the mainland that could be reached from Cyprus, its distance being only 50 nautical miles from the eastern point of the island.* For this reason the Cypriote and Cretan copper magnates erected their business houses and storage places in Minet-el-Beida.

Not far from the bay rises a hill. To-day it lies about half a mile from the coast; but we know that most ancient harbors with the passing of time gradually filled with sand, so that the sea receded, sometimes for considerable distances. Near Minet-el-Beida a small river, the Nahr-el-Fidd of the natives, has contributed its quota of mud.

At all events, the formation of the hill near Minet-el-Beida cannot be explained geologically. It rises without an intermediate stage from a substratum of calcareous rock. Probably it consists of

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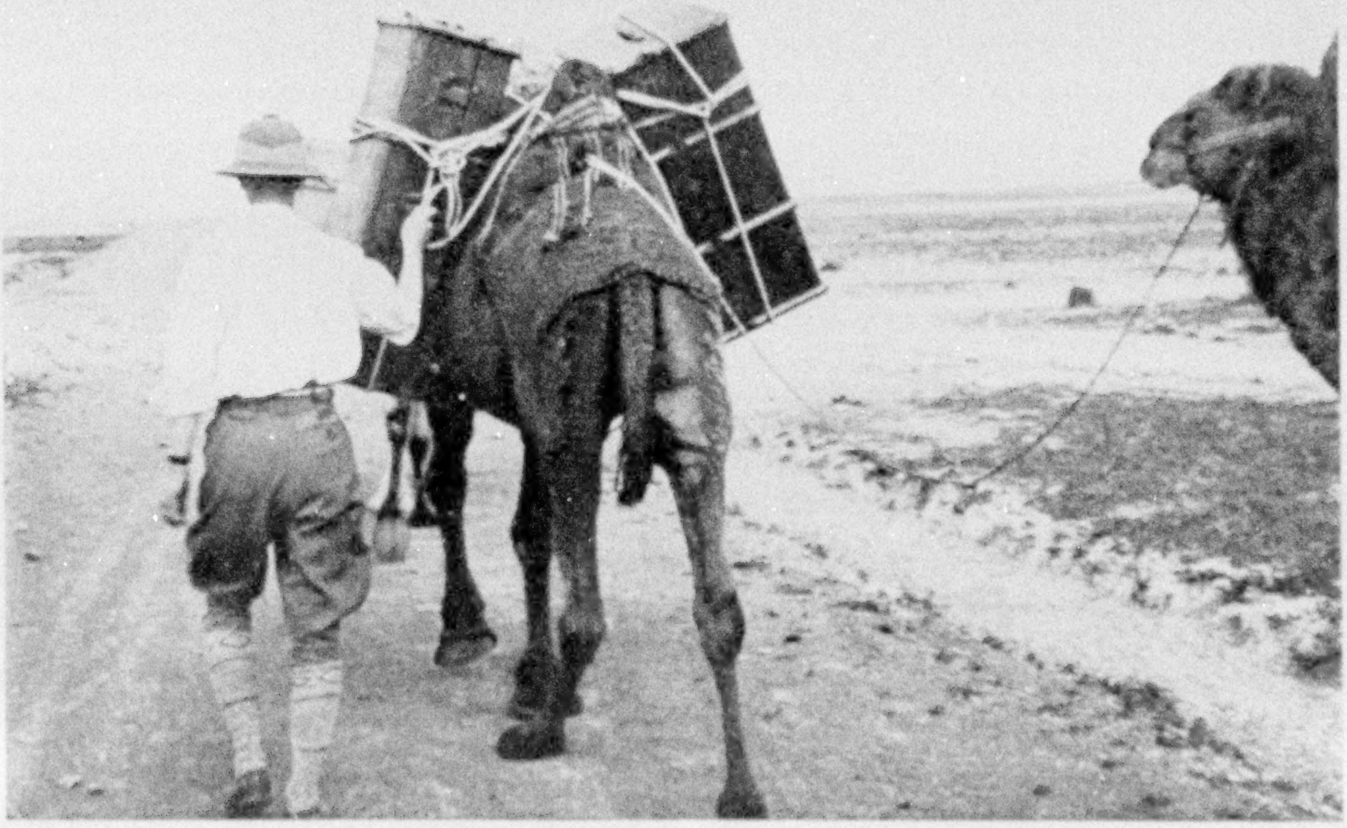
* See, also, "Unspoiled Cyprus," by Maynard Owen Williams, in the NATIONAL GEOGRAPHIC MAGAZINE for July, 1928.

FORMER BANDITS GUARD THE EXPEDITION

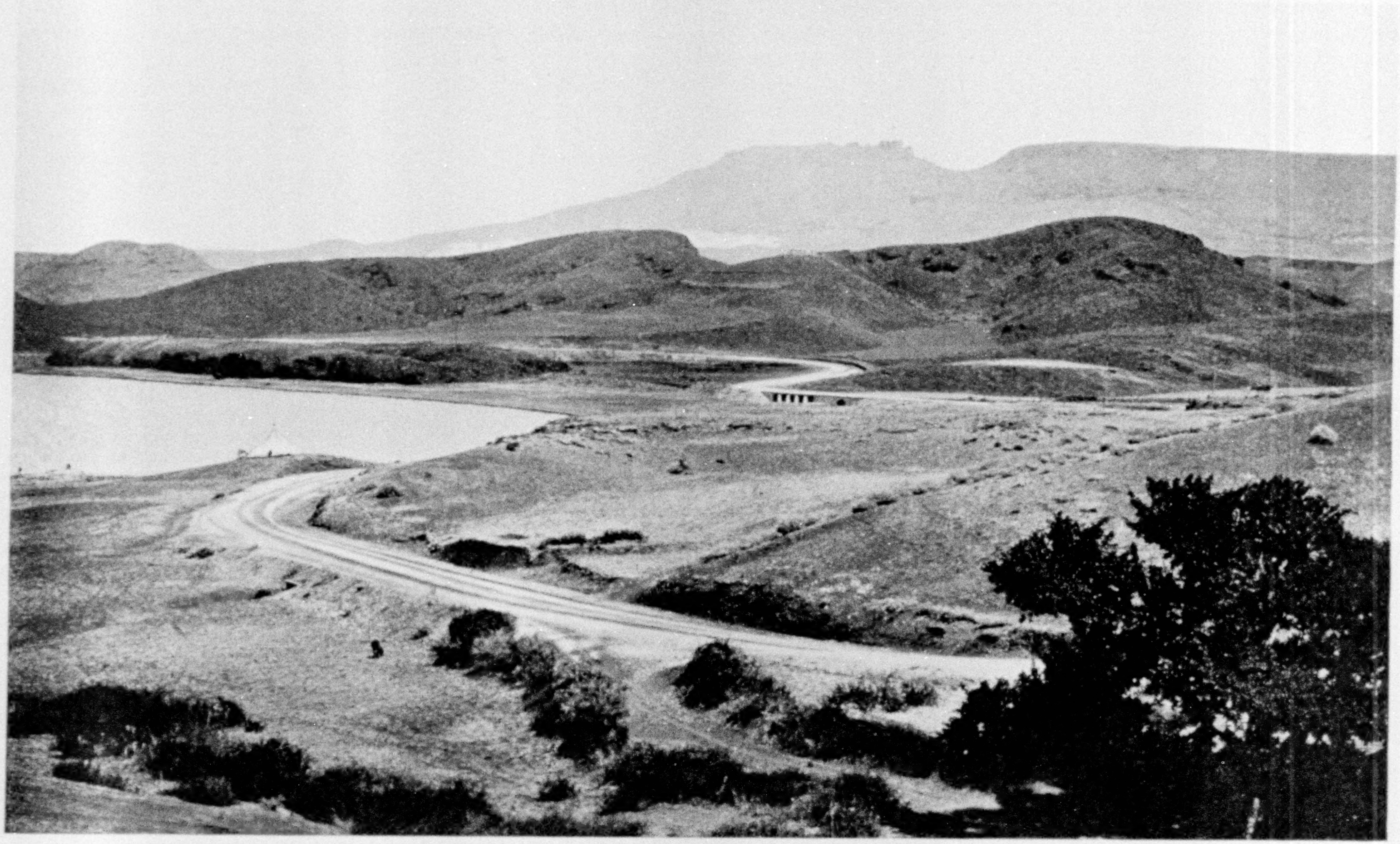
These Syrian horsemen were at one time mountain brigands, but are now enrolled as gendarmes, and are thus kept from stirring up further trouble.



Photographs from Prof. F. A. Schaeffer

A TWO-TRUNK BAGGAGE VAN

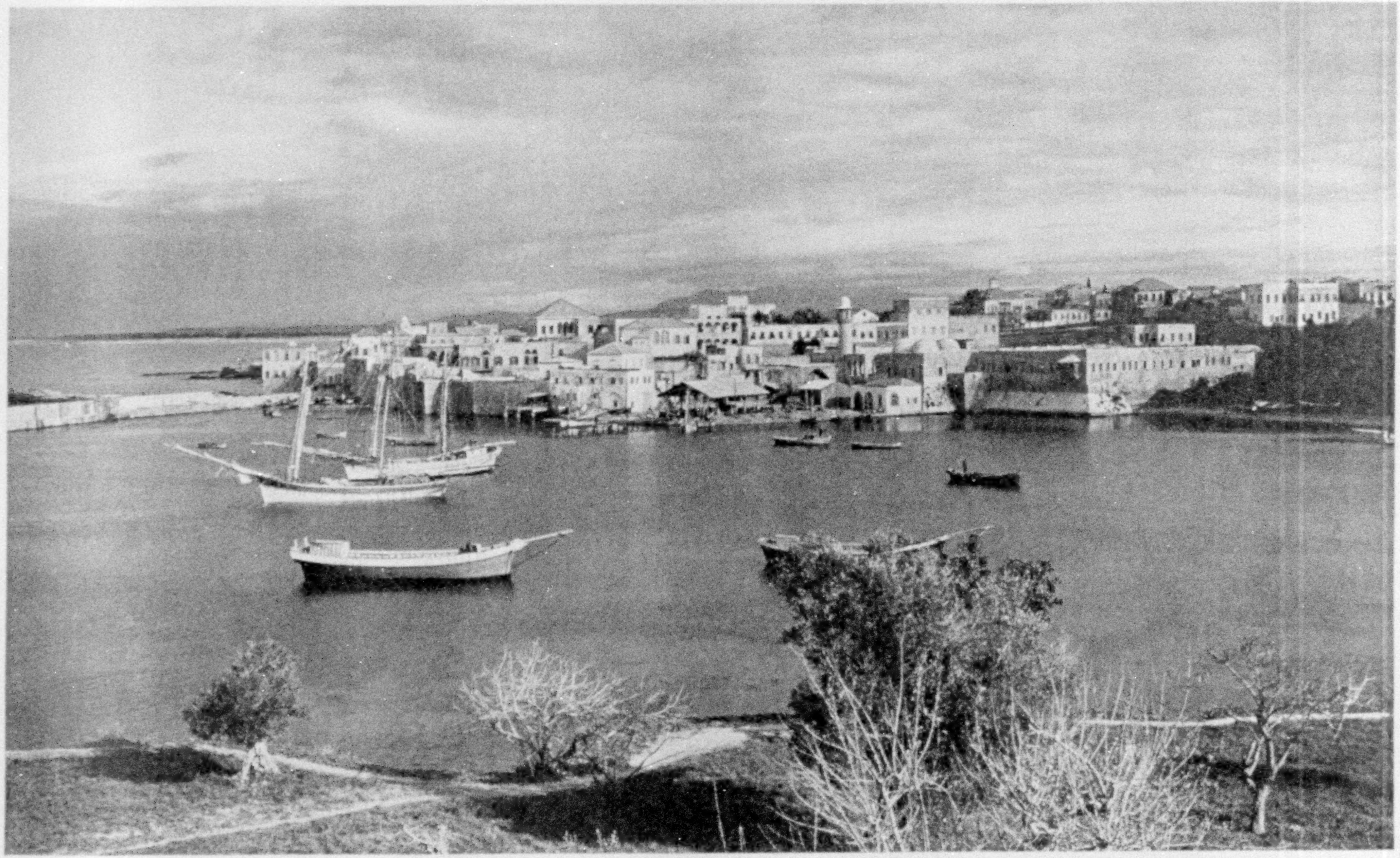
Setting out on the archeological treasure hunt, the caravan, consisting of seven baggage camels and some horses and donkeys, left Latakieh for Minet-el-Beida in March, 1929.



Photograph from Prof. F. A. Schaeffer

THE ROAD FROM TRIPOLI TO LATAKIEH IS THE MOST IMPORTANT THOROUGHFARE OF NORTHERN SYRIA

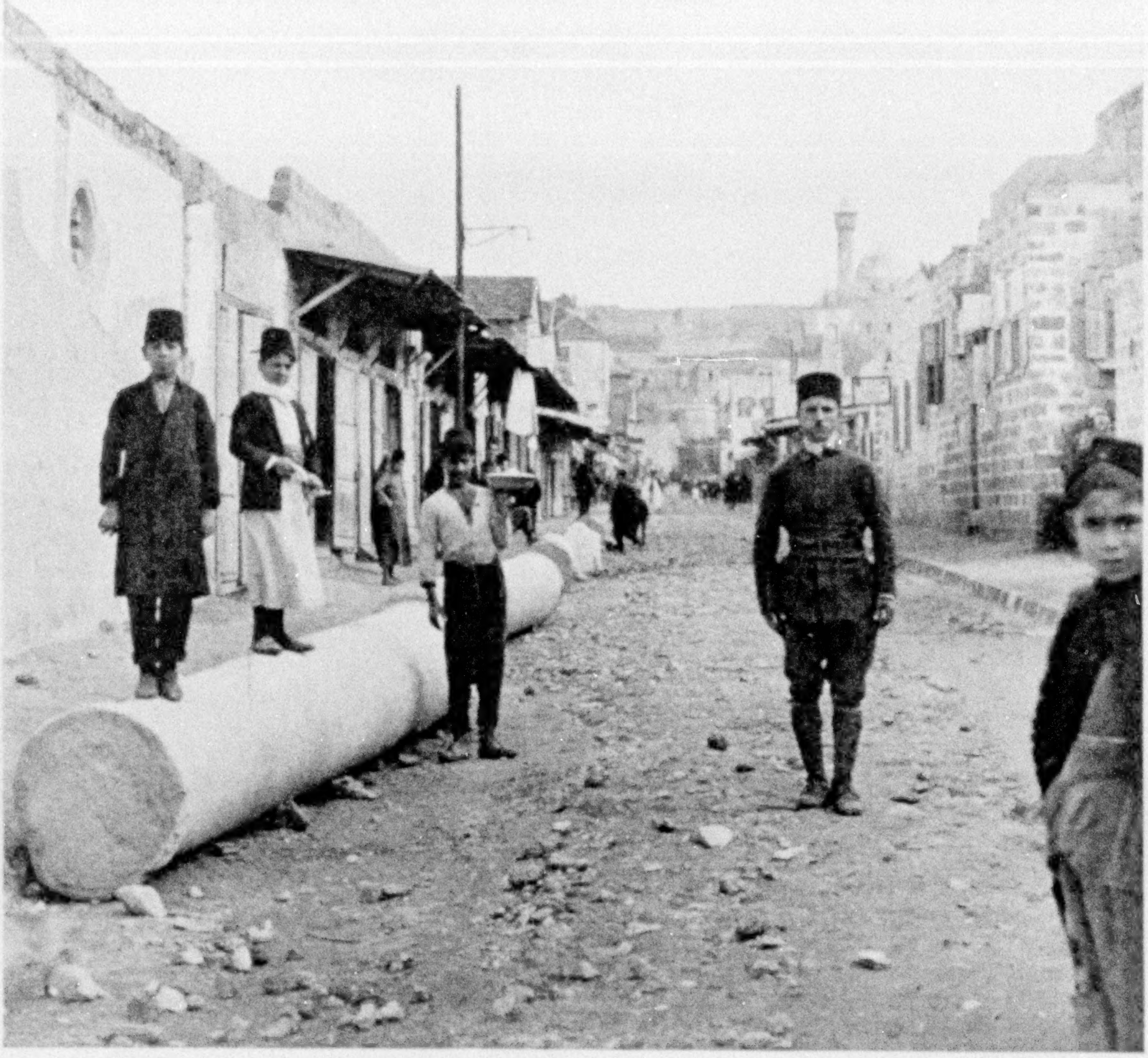
On the hill in the background is the Margab, a castle of the Crusaders (see, also, illustration, page 493).



Photograph by Maynard Owen Williams

LOOKING NORTH ACROSS THE HARBOR OF LATAKIEH

On the far side are warehouses and the usual port-side places of trade. The main town lies half a mile farther to the east and north. In the distance a cloud covers the bald head of Djebel el Akra, sometimes known as Mount Casius, for on it the Greeks and Romans worshiped Jupiter Casius. An early name for Latakieh was Laodicea; but, since there were at least eight cities so called, this one was distinguished by the epithet "ad mare"—on the sea. Latakieh is the capital of the new Alaouite State.



Photograph by Maynard Owen Williams

ANCIENT COLUMNS LINE A NEW STREET IN THE ALAOUITE CAPITAL

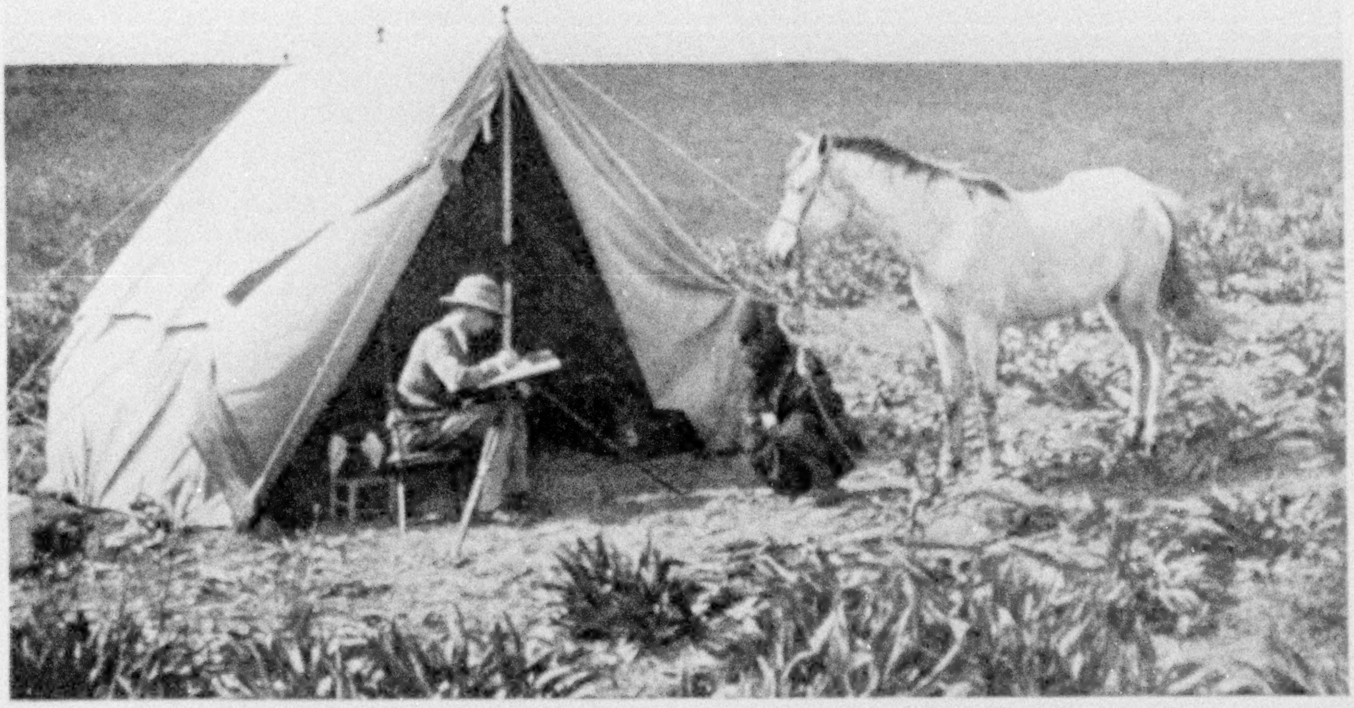
Latakieh gives the impression that the Romans must have spent most of their time with plumb line and calipers, testing the perfection of long drums of Aswan granite, or syenite. Though the people have put such relics to many uses, these columns have come down from the past in vast numbers, streets and harbors being cluttered with them.

superimposed ruins of the former seaport. Its length of 3,000 feet, its width of 1,960, and its height of 65 feet indicate the importance of the early city. On the surface of the hill, however, there remains no obvious trace of the ancient ruins. The natives call it "Ras Shamra," Cape Fennel, because it is partly overgrown with this fragrant plant.

### AN ALAOUITE MAKES THE FIRST DISCOVERY

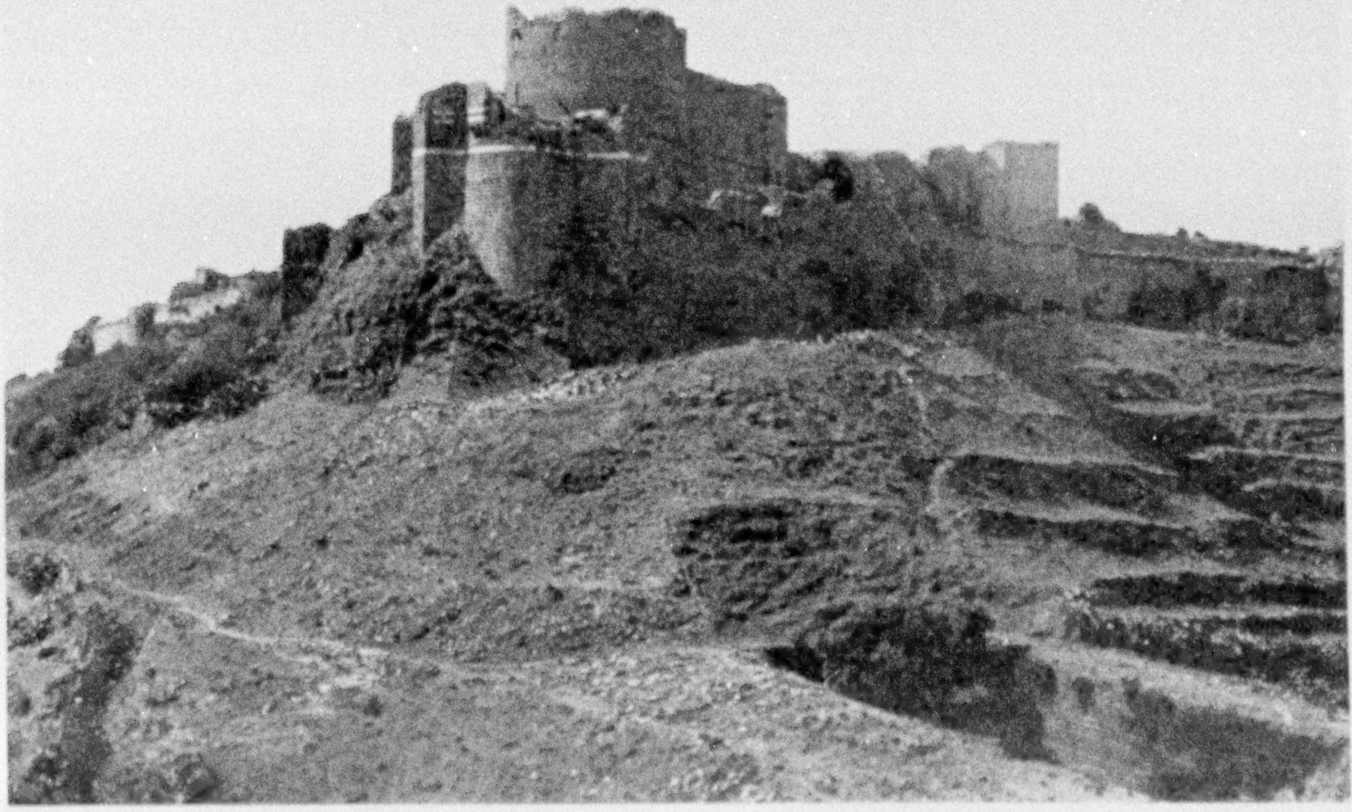
The connection of Ras Shamra with Minet-el-Beida, and with Cyprus, Crete, Egypt, and Mesopotamia, had been studied for a long time by Prof. René Dussaud, Curator of Oriental Antiquities in the Museum of the Louvre. By a lucky coincidence his conclusions found splendid confirmation.

In the spring of 1928 an Alaouite plowed up at some distance from the Bay of Minet-el-Beida a flagstone which covered the entrance to a subterranean passage. This led to a burial chamber, which the native rifled. It probably contained gold objects, which got into the hands of antique dealers and were lost. But the Governor of the Alaouites, H. Schoeffler, learned of the discovery, and



THE EXPEDITION PITCHED ITS TENT ON A DUNE NEAR THE BAY OF MINET-EL-BEIDA

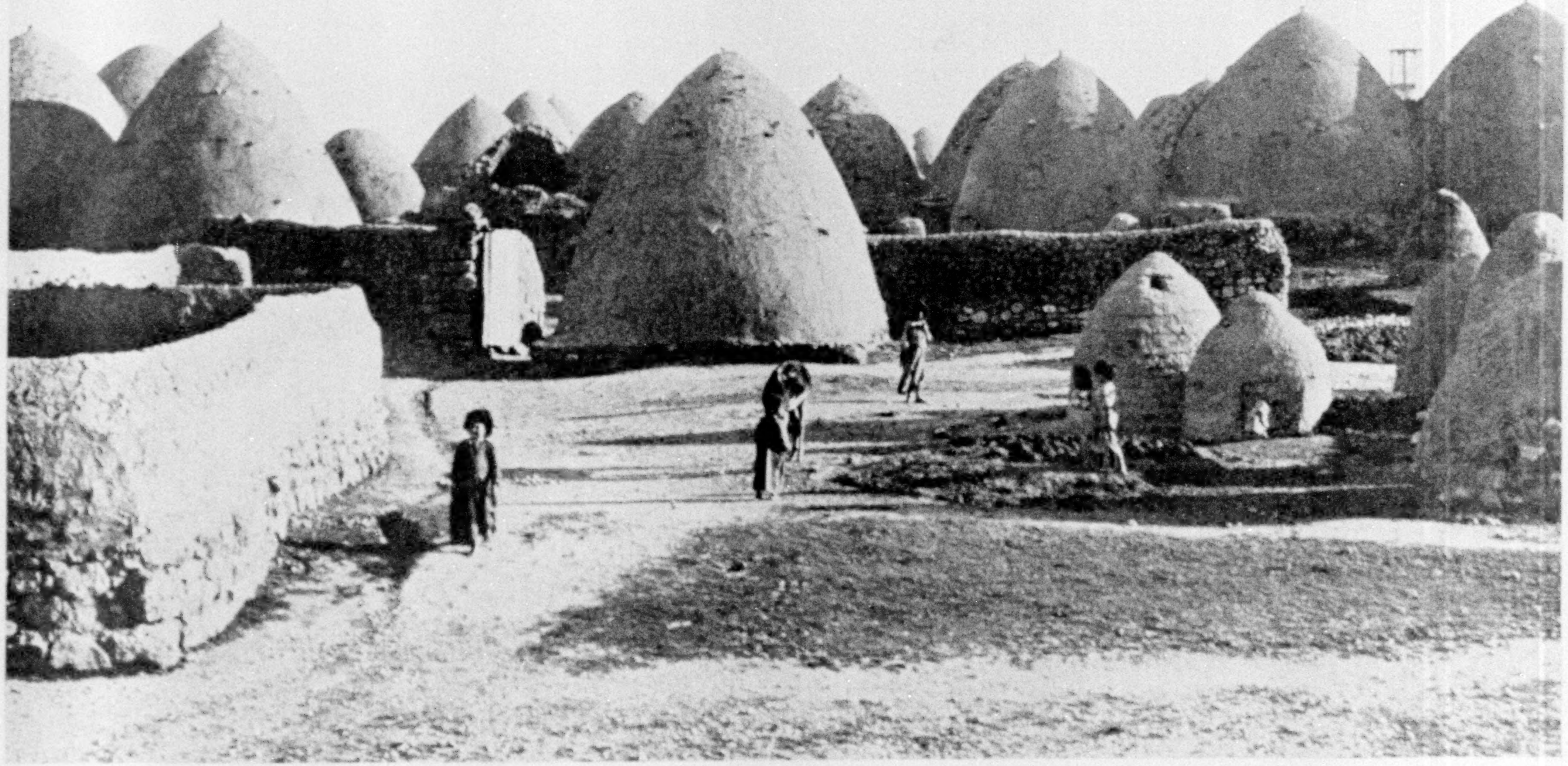
Excavation work was begun as soon as the author's camp had been set up.



Photographs from Prof. F. A. Schaeffer

CASTLE MARGAB, GRIM RELIC OF DAYS WHEN CROSS AND CRESCENT CLASHED

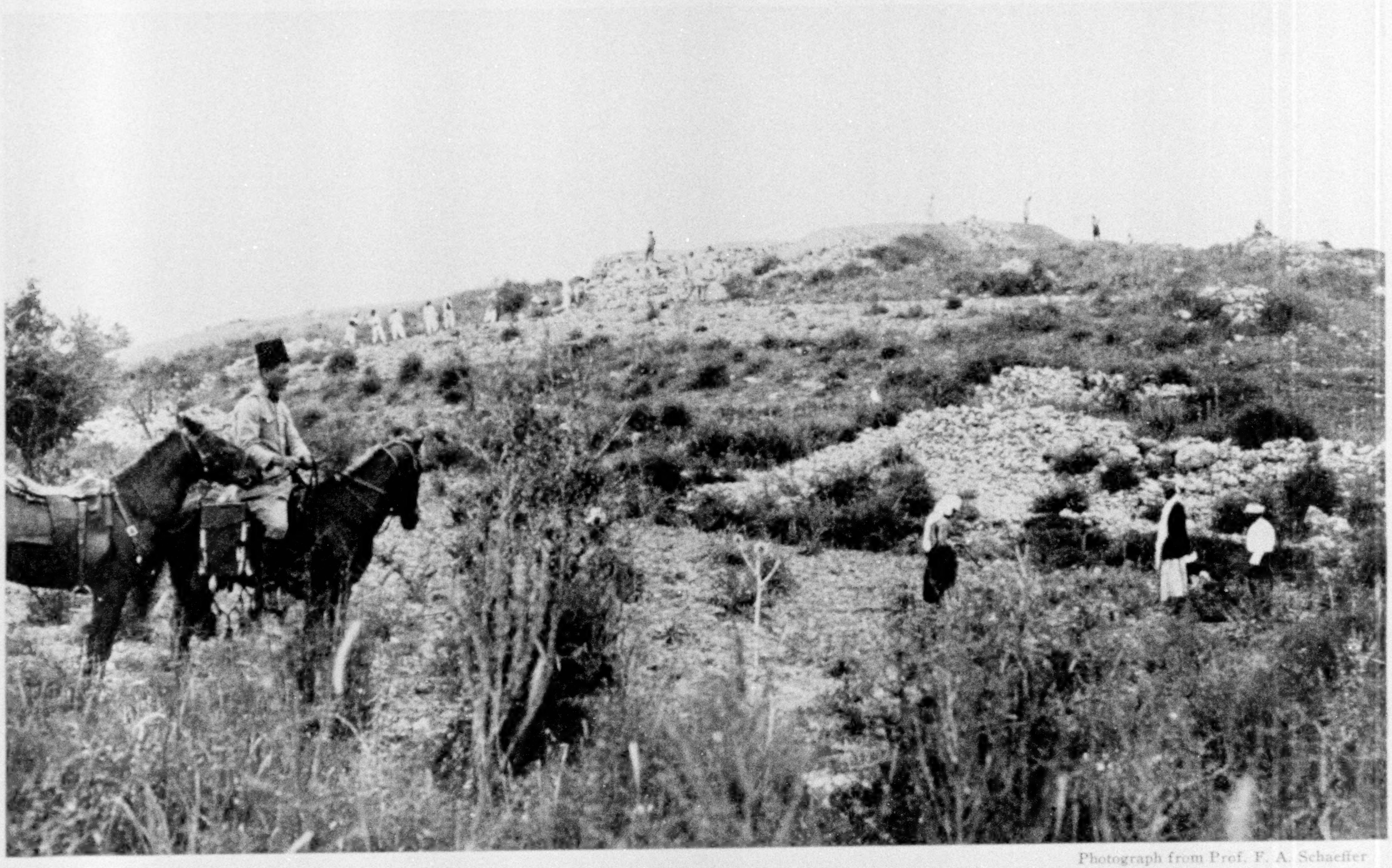
Deserted now, this fortress of the Knights Hospitalers could once accommodate 2,000 families and 1,000 horses. It keeps lonely vigil on the heights above the sea between Tartous and Latakieh (see, also, illustration, page 490).



Photograph by Maynard Owen Williams

BEEHIVE VILLAGES ARE COMMON IN THE ALEP (ALEPPO) PLAIN

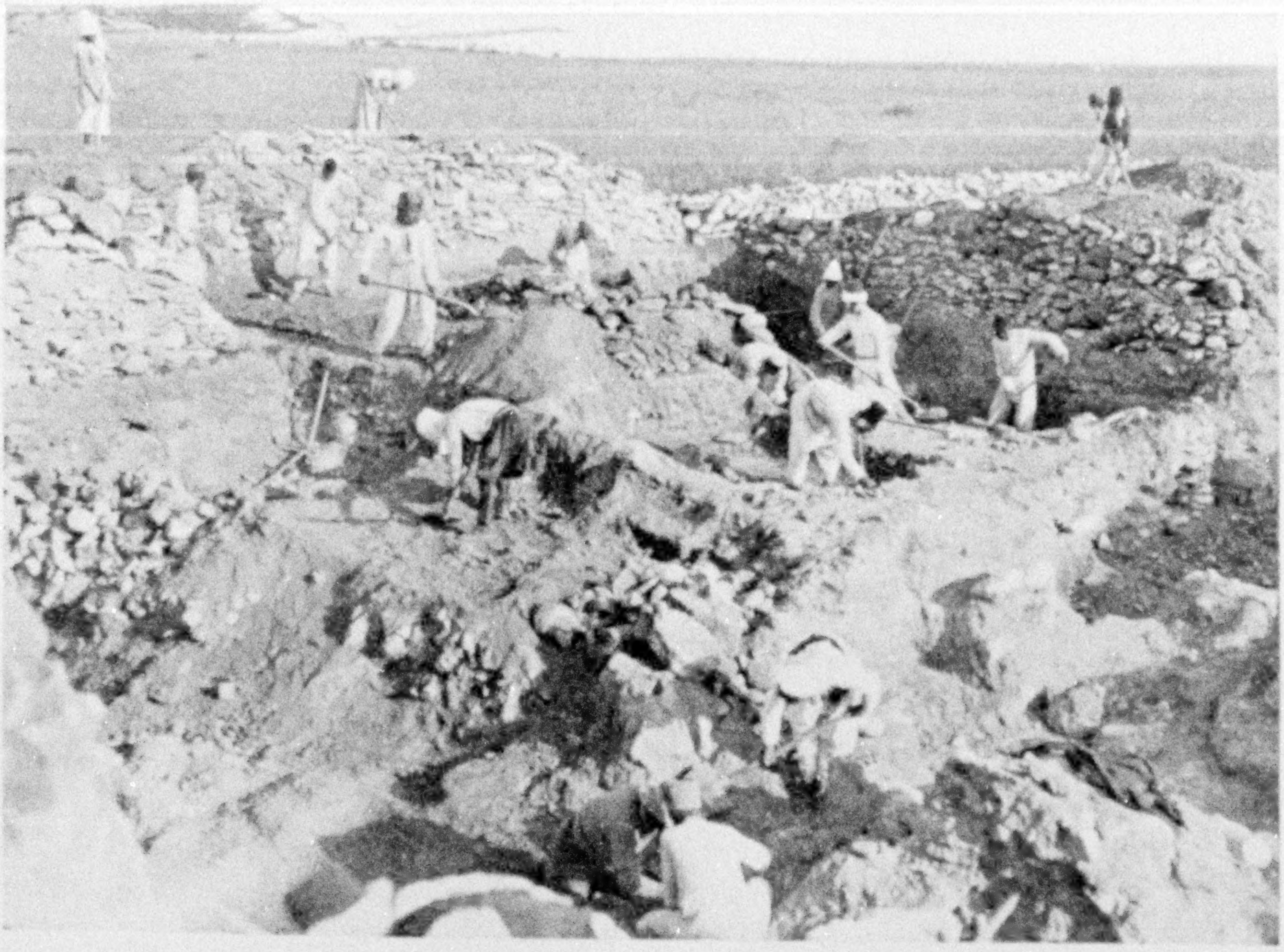
As there is no timber in this region, the dwellings are made of mud brick and plastered on the outside with mud. This village is near the border of the Alaouite country.



Photograph from Prof. F. A. Schaeffer

RAS SHAMRA (CAPE FENNEL), WHERE THE EXPEDITION FOUND THE RUINS OF THE PALACE OF THE KINGS

After working on the royal necropolis of Minet-el-Beida, the archeologists sought for the town and palace to which it had belonged. The mound showed hardly a trace of ancient ruins on the surface, but a lofty platform on its highest point, facing the sea, was noted. Here the excavators began to dig and made startling discoveries (see, also, text, page 507).



Photograph from Prof. F. A. Schaeffer

DIGGING THEIR WAY TO THE SECOND MILLENNIUM B. C.

After excavating down to the undisturbed subsoil of a surface about an acre in extent, the archeologists counted 80 places where findings of importance had been made.

after an inspection of the place advised the Government Bureau of Antiquities in Beyrouth to send an archeologist at once.

The excavations undertaken by the chief of this Bureau, C. Virolleaud, a cuneiform expert, were without result, but in the rubbish of the tomb were some pieces of clay pottery. When a map of the tomb was placed before Professor Dussaud in Paris, he at once recognized its similarity to the tombs of the Cretan kings.

Among the pieces of pottery, Professor Dussaud found some Mycenæan and Cypriote painted jars of the second millennium B. C. He had no doubts whatsoever; the tomb must have belonged to the necropolis of the former seaport of Minet-el-Beida. The unsuccessful outcome of the first excavation did not discourage him, and he suggested that the Académie des Inscriptions et Belles-Lettres of the Institut de France in Paris dispatch an archeological expedition with the object of locating this seaport.

So this is how I came into the State of the Alaouites, with the leadership of the expedition entrusted to me by the Academy. The French archeologist, G. Chenet, my friend and coworker, accompanied me.

### THE ARRIVAL AT THE PLACE FOR EXCAVATION

"Effendi, it is time for me to go back," said Selim, my caravan guide.

I was lost in admiration on beholding the beautiful Bay of Minet-el-Beida. In the meantime Selim and the soldiers had freed the camels of their heavy burdens and piled everything in confusion on the flat dune where I intended to pitch my tent. I went to my money box for the agreed price in Turkish silver coins, as the natives of northern Syria prefer the money of their former rulers to Syrian paper and copper money. Pocketing his pay, together with generous baksheesh, Selim took the lead camel by the halter and went off, singing happily. When his voice and the camels' bells had died away in the distance, a sense of loneliness overcame me and I felt cut off from the civilized world, entirely dependent upon myself.

But this feeling soon gave way to the joy of overcoming obstacles. Night falls quickly in Syria. I hurriedly gave orders to pitch the tent, not an easy job with strong night breezes blowing from the bay.

In the meantime Chenet made some hot tea and opened a jar of preserves. After having brought our baggage and provisions under cover, we crawled upon our cots, exhausted by the tiresome journey. My Syrian horsemen looked for resting places among the near-by shrubs of the coast. Wrapped in saddle-cloths, they were accustomed to sleeping under the open sky, while the animals grazed.

The lapping of the waves that glided over the sands of the near-by beach rang softly on our ears, as if the sea were breathing quietly in a sound sleep.

The chill of the morning woke us early and we found our tent covered with frost. Throughout the month of April we were quite cold during the night, whereas in the daytime the sun blazed down upon us. Only at the beginning of May did the night frosts cease.

Photograph by Maynard Owen Williams

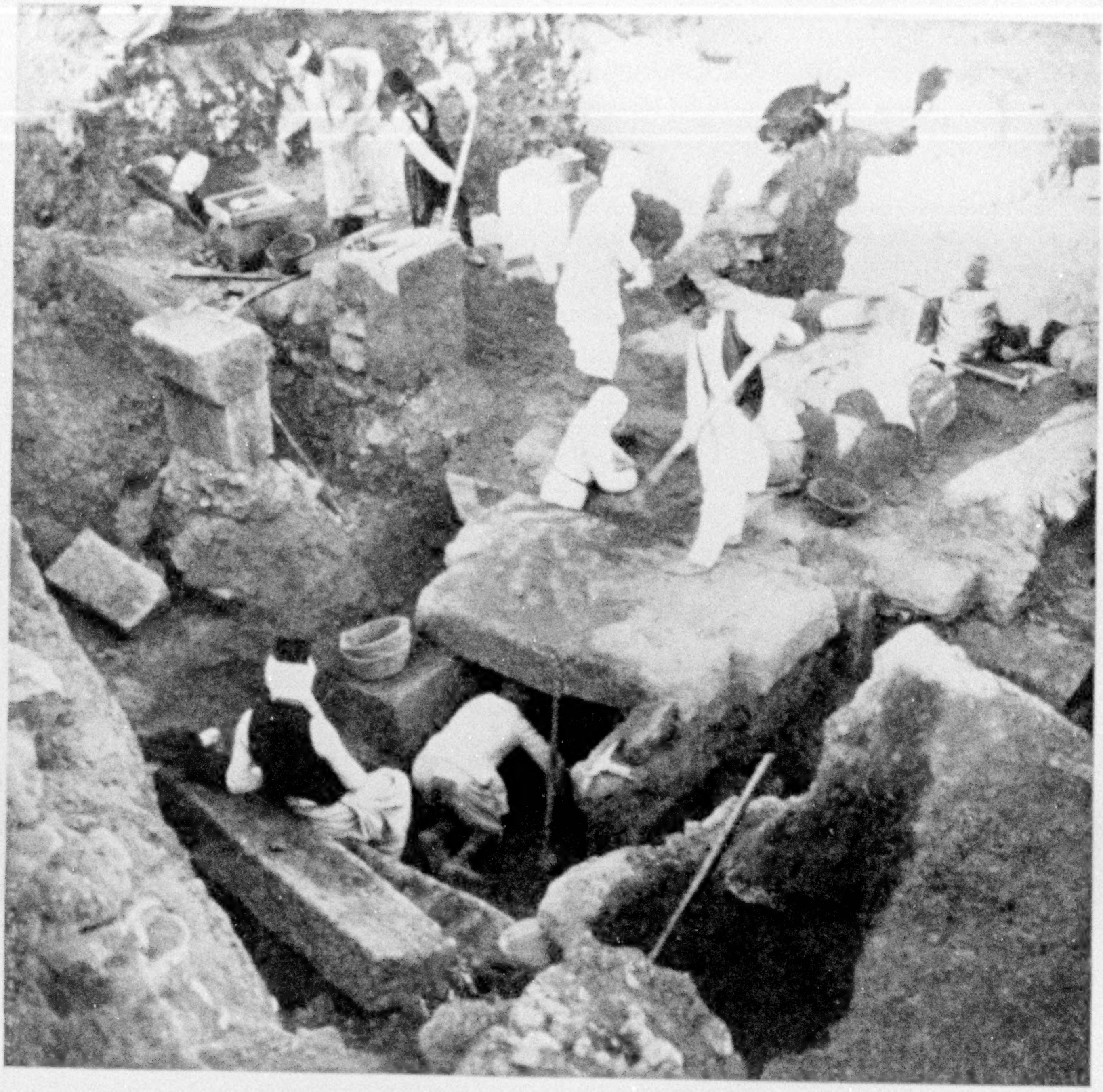
THE ROVING LENS NEEDS PSYCHOLOGY'S AID AMONG THE ALAOUITE PEOPLE

The men object to having their women relatives photographed, but when invited to pose, the central figure dragged in his womenfolk for company.

## RIFLES EXCHANGED FOR PICKS

Next morning the detachment of 20 Syrian soldiers arrived, under the command of a French sergeant (see, also, text, page 481). Lately Turkish bandits had crossed the boundary and robbed travelers; hence this method of protection. Except in the case of one or two guards, I had the rifles of the soldiers exchanged for picks and put them to work without delay.

After looking the ground over for several days, I decided to begin work on a slight elevation near the bay. To do this we needed additional workmen, so I sent soldiers to a near-by Alaouite village to find recruits. They came timidly at first, because they believed I wanted to engage them as serfs; but when, after the first week, I paid every workman with good, hard silver, natives flocked in from far and near. News of the unexpected op-



Photograph from Prof. F. A. Schaeffer

THE ENTRANCE TO THE SECOND ROYAL TOMB IS UNCOVERED

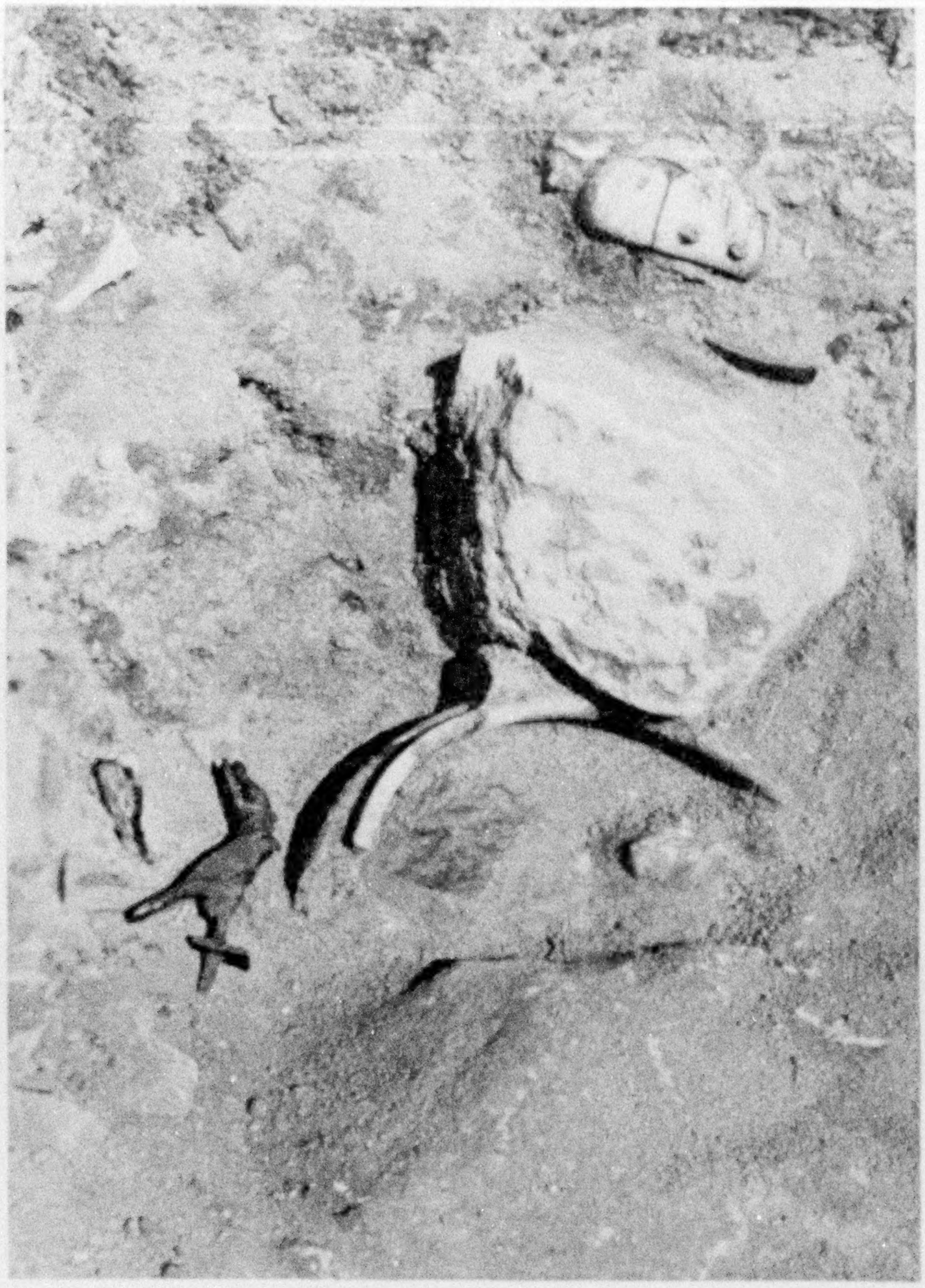
During the excavation of the large flagstones over the passage leading to the burial chamber, some fell over suddenly, and the archeologists narrowly escaped being crushed (see text, page 503).

portunity to earn money had spread with lightning speed. Also came idlers and thieves, who had an idea of making a little something on the side by stealing antiquities and selling them to tradesmen in Alep and Latakieh. But they were discovered and sent away before they could do harm.

As a rule, I left the natives in uncertainty as to what I was looking for. Often I gave baksheesh for quite insignificant pieces of clay which they had found, whereas valuable bronze objects I sometimes laid aside casually, after lightly praising the finders. A workman who put any object in his wide, baggy trousers was severely punished and dismissed, but the industrious and willing received a bonus. Before long there was a lively rivalry among my men.

Our excavations were soon crowned with success. Not far from the bay we found ceramic traces of the second millennium before Christ, and, following them, we discovered the necropolis of the early seaport and the actual tombs of the kings who had resided in this city.

When we first began to dig, it was difficult to identify the strange finds brought to light. On a surface about an acre in extent, through which we dug parallel ditches to the undisturbed geological subsoil, we counted 80 places of discovery, and at a depth of from two to six feet we came across exquisite clay pottery of the second millennium B. C. Among our treasures were small goblets probably imported from Cyprus, magnificent vases, similar to those which American and English archeologists have removed from Cretan palaces, and large storage jars, like those in use during the lifetime of Christ in Palestine (see pages 500 and 502).



Photograph from Prof. F. A. Schaeffer

HORUS, THE HAWK GOD, EMERGES FROM HIS 3,000-YEAR BURIAL

The figure lay amid fragments of a vase and a Cyprian bowl (see, also, illustration, page 511, and text, below).

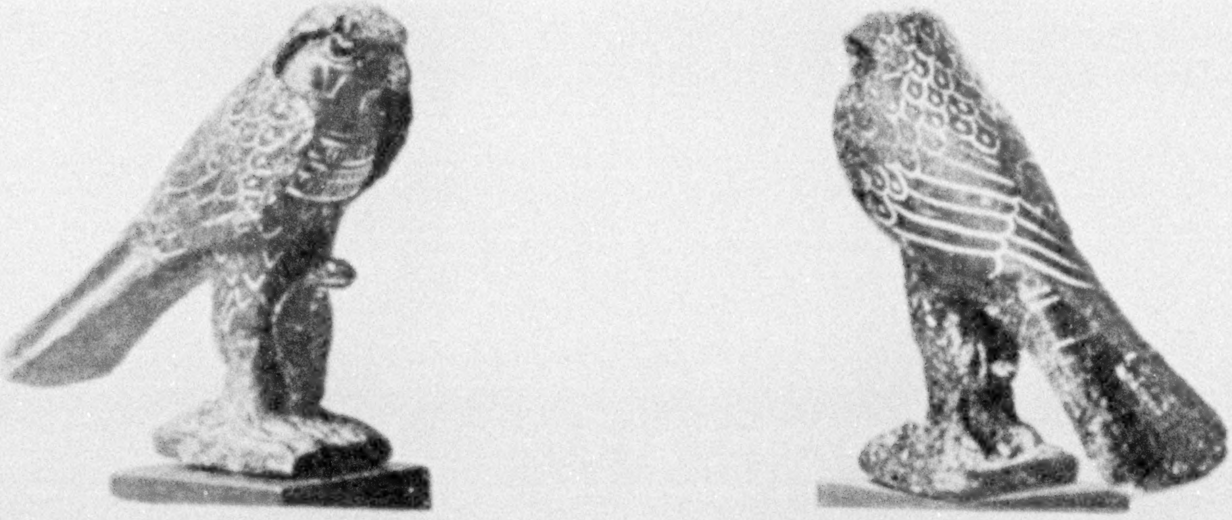
Soon we had material sufficient for a small ceramic museum. We could have equipped a whole kitchen and we actually did assemble a complete table service 3,500 years old. At one place we found a whole set of weights, the largest of which is exactly equal to an Egyptian *mina* of 437 grams; the others were fractions of it (see illustration, page 515), thus establishing the highly significant fact that Cretan-Cypriote merchants of Minet-el-Beida used Egyptian weights.

### OTHER SURPRISES IN STORE

Other surprises were still to come. At the foot of a little wall, completely hidden in the ground, lay a well-preserved bronze figure of the Egyptian hawk god, Horus, covered with patina. The royal bird wears the *pschent*, or double crown of Upper and Lower Egypt. Not far from it lay another figure of a hawk, the plumage artistically inlaid with gold. Between his claws he holds the uræus, or sacred asp, symbol of royalty which the Pharaohs wore on their headdresses (see, also, pages 500 and 511).

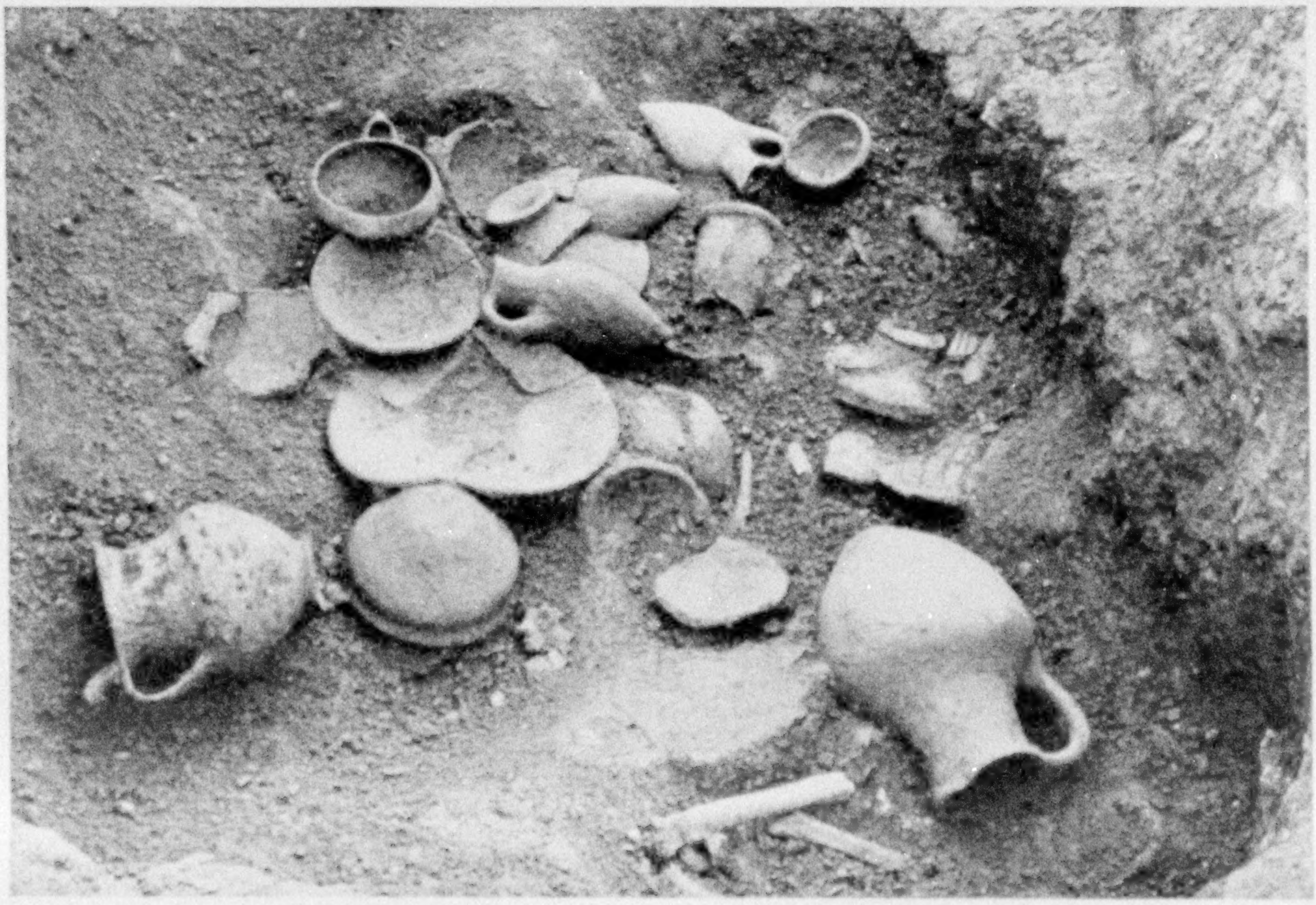
On this splendid example of ancient goldsmith's craft one may distinctly recognize the Egyptian style. But a goldsmith of the Nile Valley would never have dared to place the royal symbol of honor, the uræus, between the claws of the hawk god. Our discovery, therefore, reveals a mixture of Egyptian and foreign influence—a fact easily explained by the geographic location of the place of discovery, at the junction of great thoroughfares from various centers of culture.

The same observation applies to the bronze figure of a seated god which we dug up next to the two hawks. The head of the youthful god has the typical profile



A GOLDSMITH OF THE LONG AGO WROUGHT THIS EXQUISITE HAWK GOD

Between his claws he holds the uræus, or sacred asp, a symbol of royalty worn by the Pharaohs on their headdresses. Though Egyptian in inspiration, this figure shows a mixture of foreign influence (see, also, text, page 499).



Photographs from Prof. F. A. Schaeffer

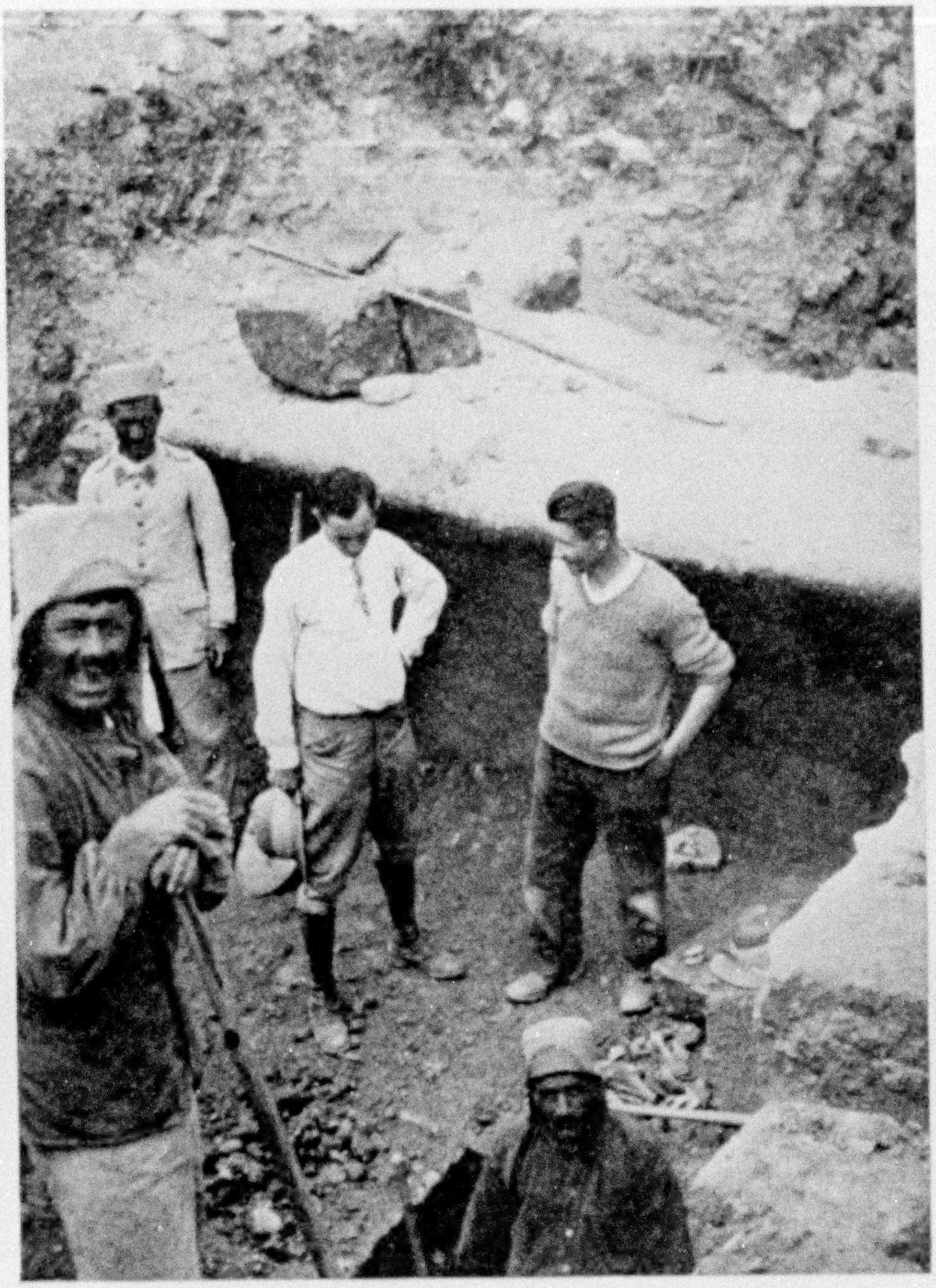
POTTERY 33 CENTURIES OLD

Vases similar to those found in Cretan palaces, goblets that may have come from Cyprus, and other dishes of clay were photographed just as they have lain in the ground during the passing of the ages.

of the Pharaohs of the 18th dynasty, but the gesture of his hand, raised in blessing, is certainly not Egyptian.

Our enthusiasm about these beautiful discoveries had not yet died down when gold again glittered in the ground. Carefully we dug on and an object of extraordinary value came to light—the splendidly preserved figure of the Phœnician war and weather god, Reshef, with proud upright bearing. With his raised right arm the god is about to slay a foe; in the left hand he holds a whip. His high headdress, reminiscent of the pschent (see, also, illustration, page 511) of the Pharaohs, is plated with gold, and a beautifully wrought mask of gold covers his face. His body is protected by a silver cuirass; his right arm is adorned with a golden bracelet (see page 514).

Next to this figure we unearthed the golden statue of the Phœnician goddess of love, Astarte. Standing erect, she reveals her beautiful nude body and holds lotus flowers in her hands (see page 509). In the soil around these valuable objects lay the polished beads of a necklace of precious stones.



Photograph from Prof. F. A. Schaeffer

A DISAPPOINTMENT IS ALL IN THE DAY'S WORK

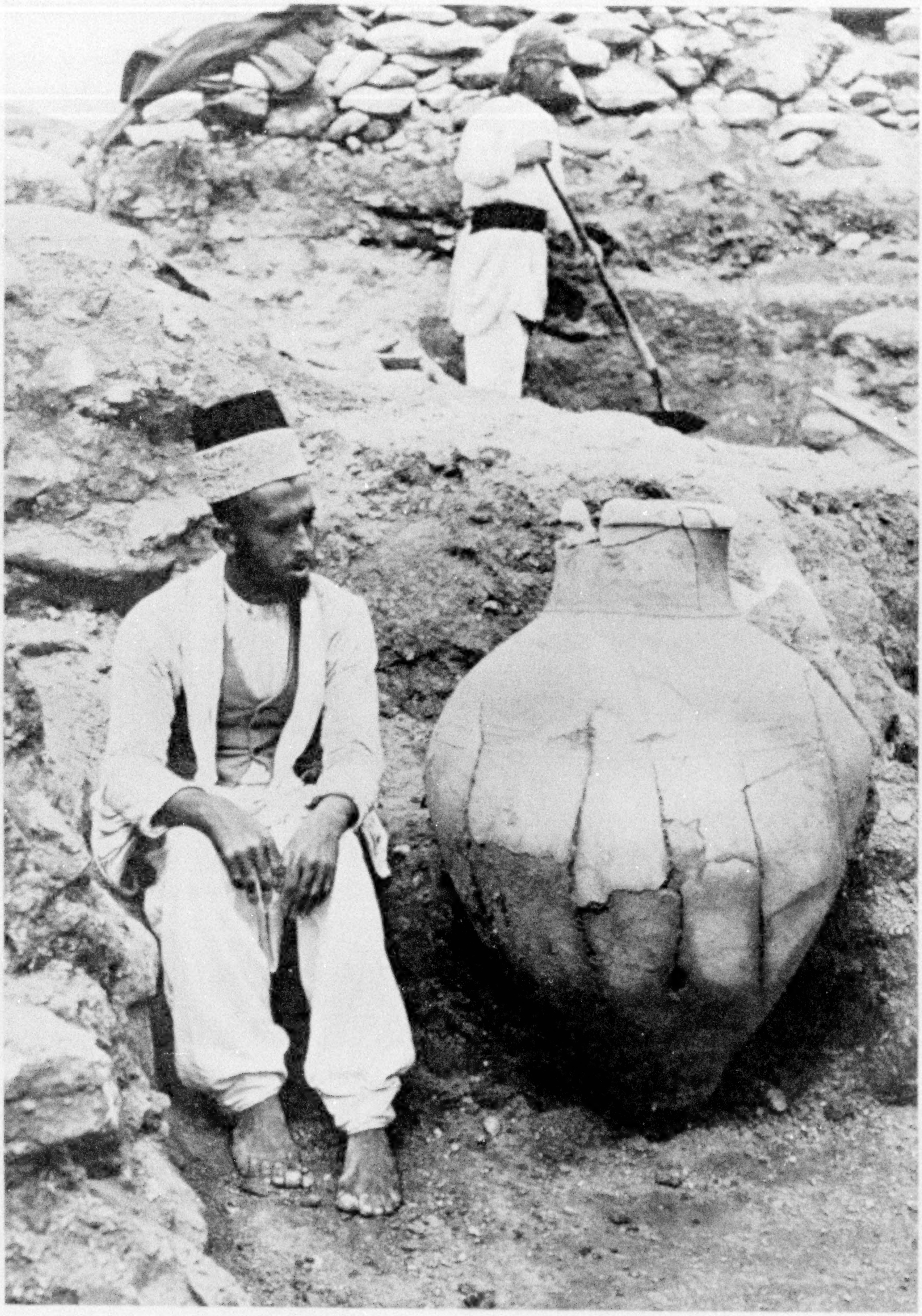
The first of the royal tombs excavated at Minet-el-Beida was a rectangular, underground structure with large flagstones carefully matched; but, unfortunately for the archeologists, it proved to be empty and incomplete.

### THE NEWS IS RUSHED TO PARIS

Immediately after we had unearthed these remarkable relics a rider was dispatched to Latakieh with a radiogram for the Academy in Paris: "The treasure of Minet-el-Beida is found!" Our motion-picture camera filmed the events of the excavation, and in time people throughout the world will see how the precious statues were brought to light.

We were not long puzzled as to why these objects were buried just at this place. A little to the south of it we came upon the foundations of a templelike structure, its floor covered with large flagstones, which in some places sounded hollow under the blows of our picks. There we discovered the underground sepulchral chambers of the kings of Minet-el-Beida, in whose honor the treasures were buried.

Our joy over this discovery was saddened by the fact that the first tomb which we opened was incomplete. Its



Photograph from Prof. F. A. Schaeffer

MATERIAL FOR A CERAMIC MUSEUM

Such storage jars as this were still in use in the days of Christ. The diggers at Ras Shamra who showed themselves especially industrious were rewarded with an increase in pay, so before long there was keen rivalry among the men as to who could outdo the other in making finds. Soon the archeologists had enough material on hand to equip a whole kitchen and assemble a complete table service (see, also, text, pages 498, 499).

walls were only partly built, the immense vaulted ceiling just begun. Of the steps that led down to the tomb, only the first two were in place. The supposition that a second tomb lay hidden under the flagstones proved false, for we sunk a shaft to the underground water level without finding anything. Finally, we consoled ourselves with the fact that the incomplete structure gave us a definite idea of the construction of such a king's tomb (see page 501).

### A WATER SUPPLY FOR THE KINGS

In order that the dead kings should never go thirsty, a water-supply system had been built next to the tomb. Long stones with gutters chiseled in them led the water into the bottom of a large jar, from which the overflow ran off into the ground through holes pierced in a stone. In addition, for times of drought when springs ran dry, a walled-in well was built next to the water system. A window in the tomb was designed to enable the dead king to reach the well easily when thirsty.

When we lifted the heavy stone cover from the well and removed the earth that had fallen into the shaft, we saw sparkling water below, good to the taste and agreeably cool. From then on our native workers drank only the water from the well of the kings' tombs of Minet-el-Beida.

Sixty-five feet to the west we found a second king's tomb, with mighty flagstones covering the passage that led to the actual burial chamber. When we removed the earth from the entrance, the first flagstones suddenly fell over. Probably, during one of the frequent earthquakes that occur along this coast, they had been tipped out of their vertical position. Unsuspectingly we had removed the earth that held them in place.

Chenet and I had just time enough to jump aside, but it was too late for the workman who was digging there. He was hurled across the shaft, but, fortunately, one of the falling stones jammed crosswise, so that he escaped with shock and a slightly bruised thigh. Liberal baksheesh and our universal remedy, iodine, soon cured him.

With great expectations we started to excavate the corridor. Carefully we removed the earth and cleared the beautifully built steps that led down to the actual burial chamber. On the sides of the steps lay numerous pieces of clay pottery, including plates, dishes, and jars which probably had once been used for food and drink for the dead (page 504).

On one of the lowest steps stood a magnificent alabaster vase, apparently of Egyptian origin. Its noble lines remind one of similar vases removed from tombs of the Pharaohs of the 19th dynasty (about 1300 B. C.). It is completely intact, and when held against the sun the light shines through it, showing the marmoreal design of the alabaster (page 507).

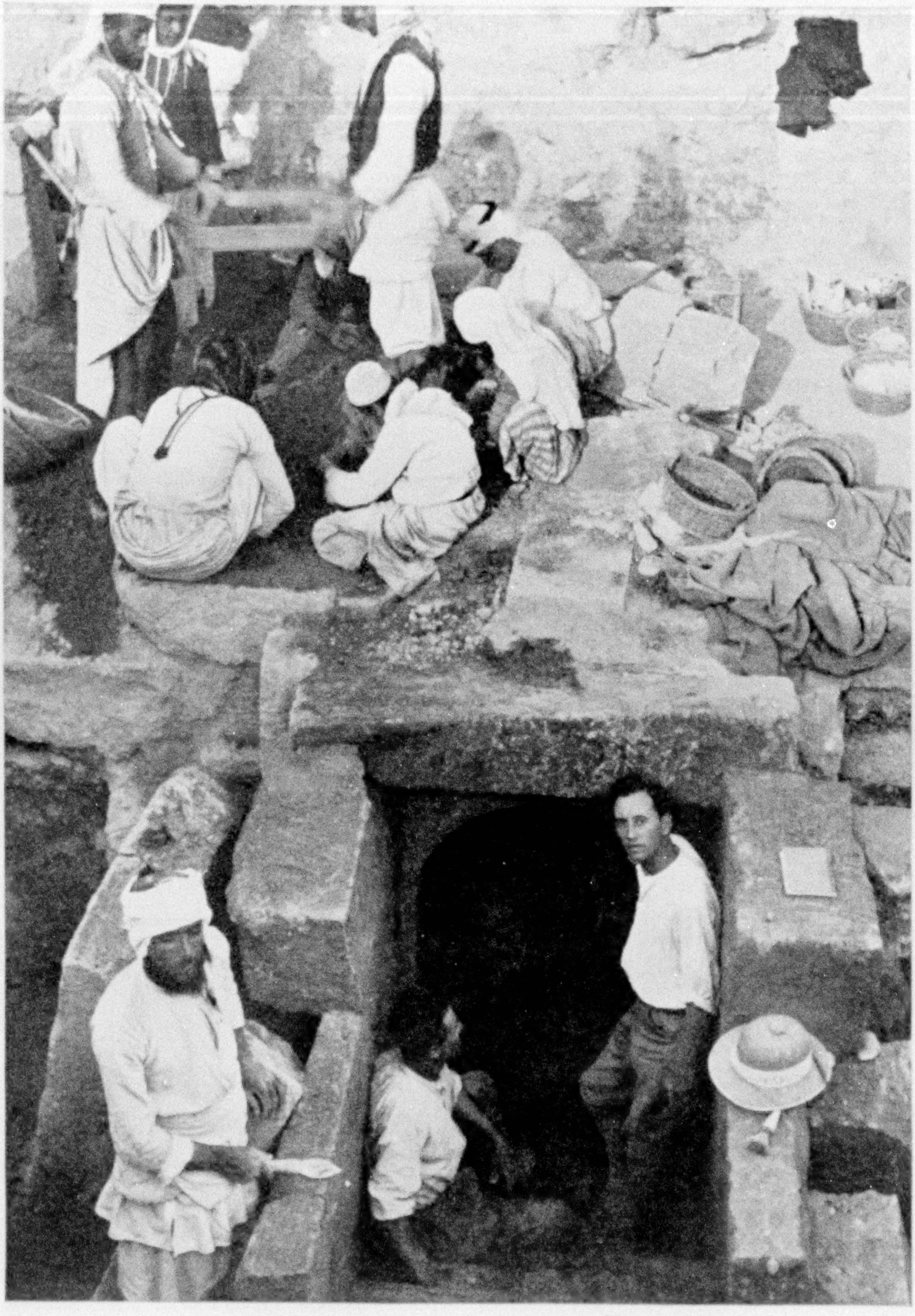
One step lower lay a painted Mycenæan vase, unusually beautiful, and next to it, in front of the entrance to the actual burial chamber, the skull of a young man, a servant who, according to the customs of those times, guarded the door to the tomb of his master. There is no doubt that the Egyptians reproached the Syrians for human sacrifices, whereas the Pharaohs contented themselves with symbolical wooden figures like the two guards in the tomb of Tutankhamen.

### TOMB ROBBERS OVERLOOK VALUABLES

As we placed the treasures carefully in front of the door of the royal tomb, I thought of the discovery of Lord Carnarvon and Mr. Howard Carter in the Valley of the Kings. Like them, we asked ourselves: What does the burial chamber contain? An earthen wall surrounded by a strong stone door frame concealed everything. Could we hope? Or should we prepare for disappointments?

When we had carefully removed enough earth from the vault to enable us to dig in it, lying down or kneeling, we discovered, to our dismay, a hole in the stone ceiling. A workman thrust his head through it from the outside and grinned at us. The existence of this hole meant that a long time ago desecrators must have entered the tomb through it and rifled the vault. That has been the fate of many royal tombs in various parts of the world; their great wealth has been too enticing. Often it has happened that shortly after the death of a king his own ministers would reopen his tomb and rob it of its treasures.

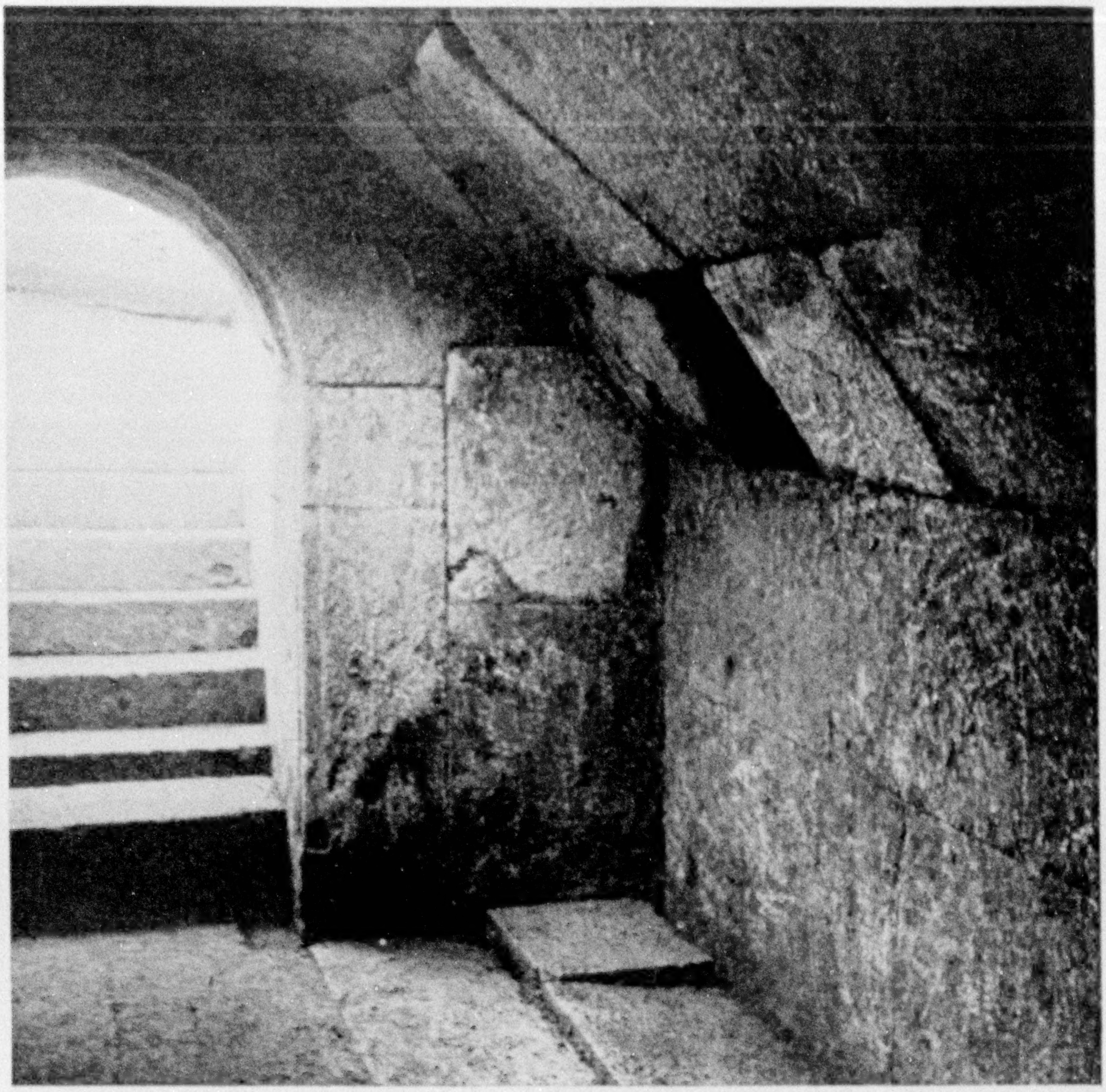
But we were not discouraged. We dug on, for we knew that tomb desecrators



Photograph from Prof. F. A. Schaeffer

THE STEPS LEADING TO THE BURIAL CHAMBER OF THE SECOND ROYAL TOMB

On each side of this admirably constructed stair lay various pieces of pottery, including dishes that had probably held food and drink for the dead. The workmen at the upper left are sifting the earth taken from the tomb in order that no object, however small, may escape discovery.



Photograph from Prof. F. A. Schaeffer

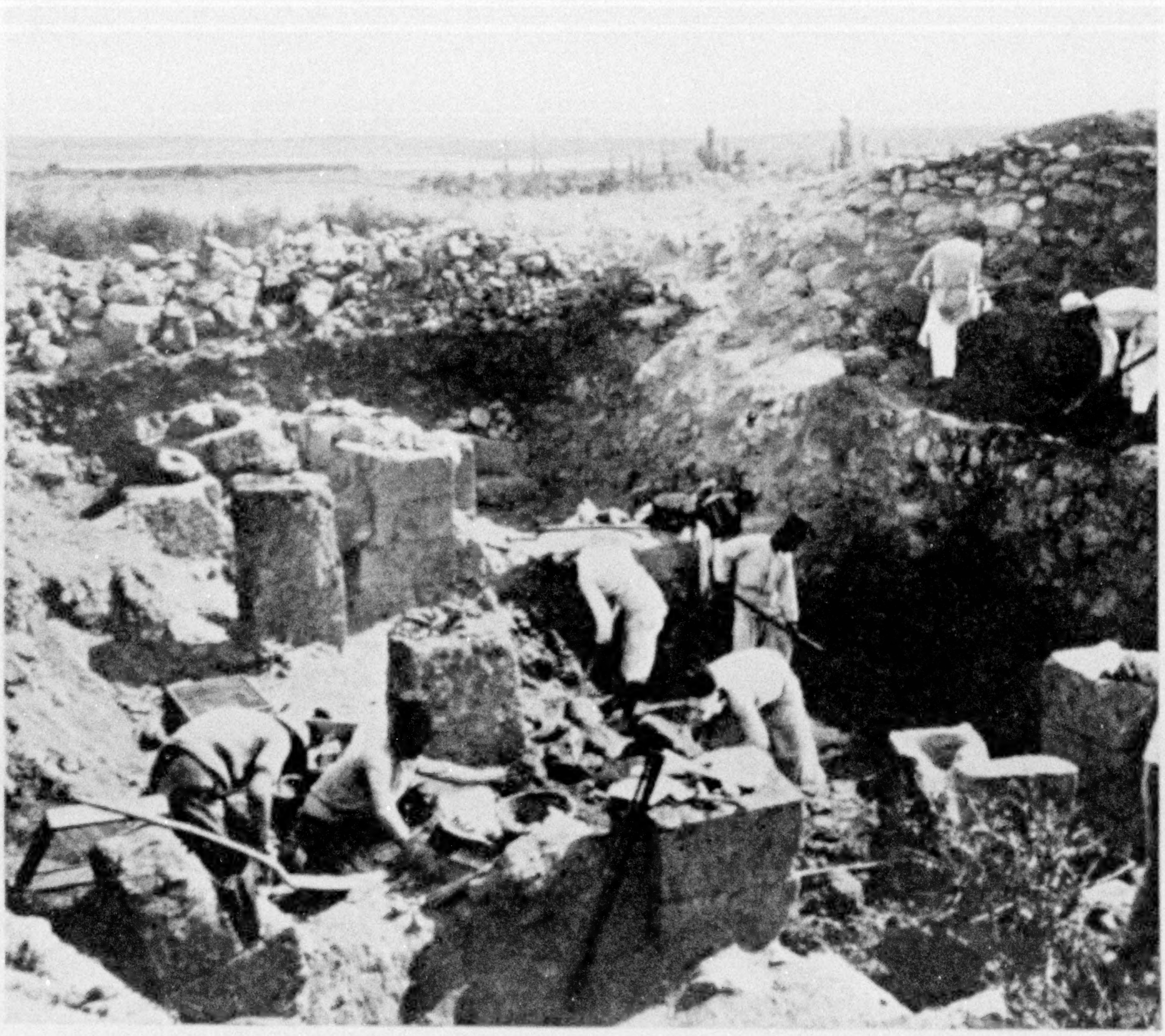
THE TOMB THAT PROVED A TREASURE HOUSE OF TIME

The view from within the vaulted chamber shows the entrance steps to this royal sepulcher of Minet-el-Beida. In the ceiling on the opposite side the archeologists discovered a window by which robbers long ago had entered to rifle the tomb. Fortunately, in their haste they overlooked many objects, among them the carved ivory lid to a jewel case (see illustration, page 476).

often overlooked valuable objects in their hurry, usually spurning those not made of silver or gold. And it is precisely just such relics of small intrinsic value that are some of our most important historic documents.

In this case we were not disappointed. The floor of the tomb was covered with many precious vases of glass, alabaster, and painted clay, broken under the feet of the robbers; but in the corners of the chamber lay, still untouched, such objects as dishes, plates, and pitchers covered with human bones, the skeletons of former royalties of Ras Shamra. We counted the remains of three dead—probably those of a king, queen, and a child. The structure above, the foundations of which we had laid bare, must have been the mausoleum, and, as such, a sign that had shown the robbers where to find their spoil.

The wealth which this tomb must have contained was indicated by the gold beads and rings which the robbers left behind. One of the gold rings is adorned with an iron wire—a fact which may cause some people to smile. But in the second millennium B. C., when all tools and weapons were made of bronze, iron was



Photograph from Prof. F. A. Schaeffer

WHERE THE EXPEDITION MADE TWO NOTABLE DISCOVERIES

In the left foreground, amid the ruins of walls and pillars of the palace library of Ras Shamra, the archeologists found tablets of surpassing historic value, in that the majority are inscribed in an *unknown language* employing an *alphabet* (see, also, text, page 510).

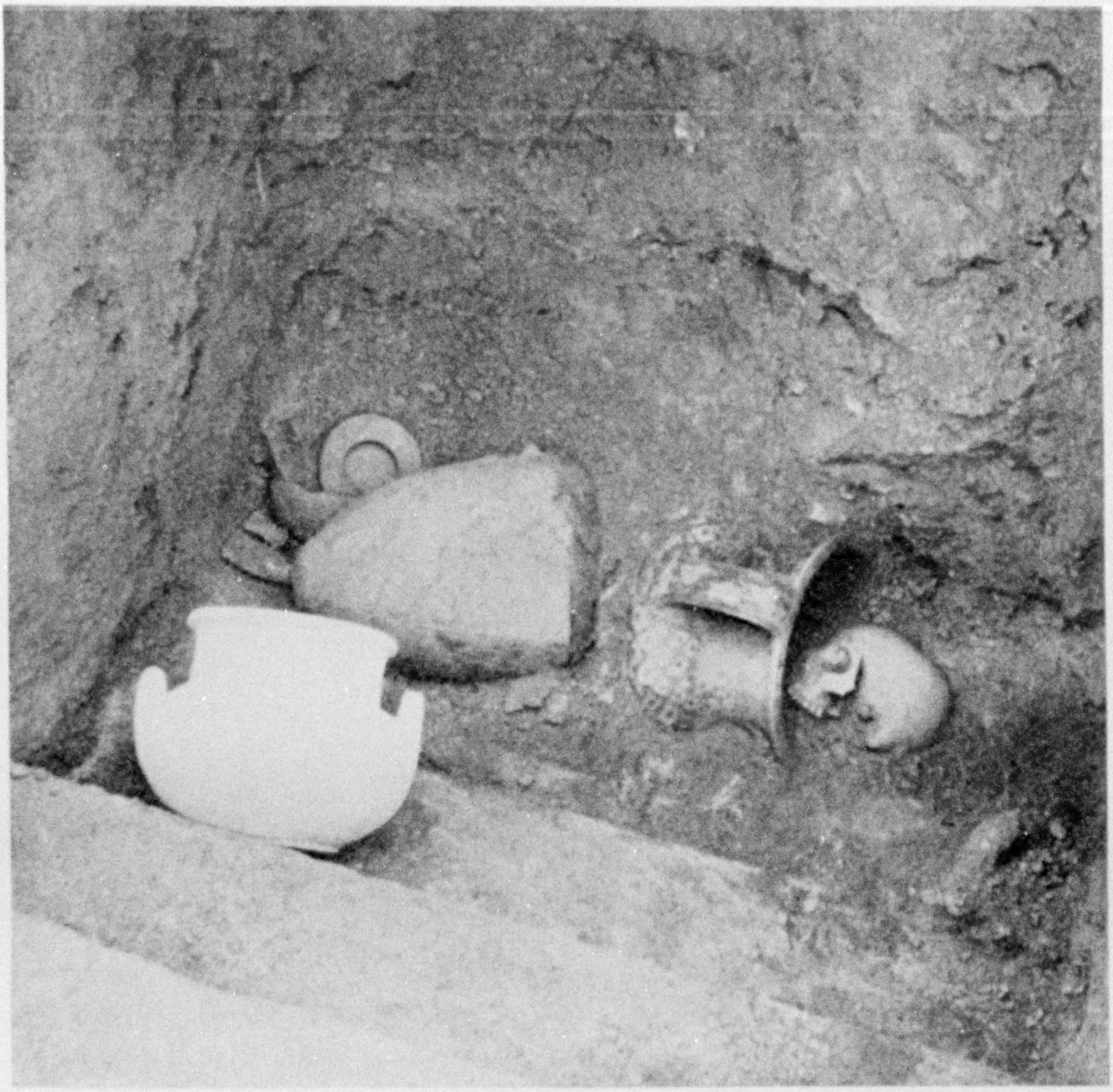
rare and therefore considered a precious metal.

We found also a cylinder bearing the deceased king's seal, with which he had once signed laws and decrees. But the most beautiful discovery was yet to come.

### A JEWEL CASE FOR A QUEEN

In the farthest corner lay the remains of an exquisite ivory box, in which the queen had probably kept her jewelry. The robbers had emptied it, then cast it aside, leaving the decorated lid intact. The beautiful relief carving represents the Cretan-Mycenæan goddess of fertility upon her throne. On each side is a ram rampant, symbol of the male element. Ripe ears of grain in her hands symbolize the fruitfulness of the earth. On her head the goddess wears a graceful Asiatic headdress. Her torso is nude. From hips to feet falls a much-pleated skirt with many ruffles. This is the most beautiful ivory relief that has been preserved from this remote age (see page 476).

If the precious discovery had been brought from the cool, somewhat damp vault into the dry heat of the Syrian summer, it would certainly have suffered damage; therefore I took some of the earth in which it had been preserved for more than three thousand years and



Photograph from Prof. F. A. Schaeffer

AN ALABASTER VASE FOUND IN THE SECOND ROYAL TOMB

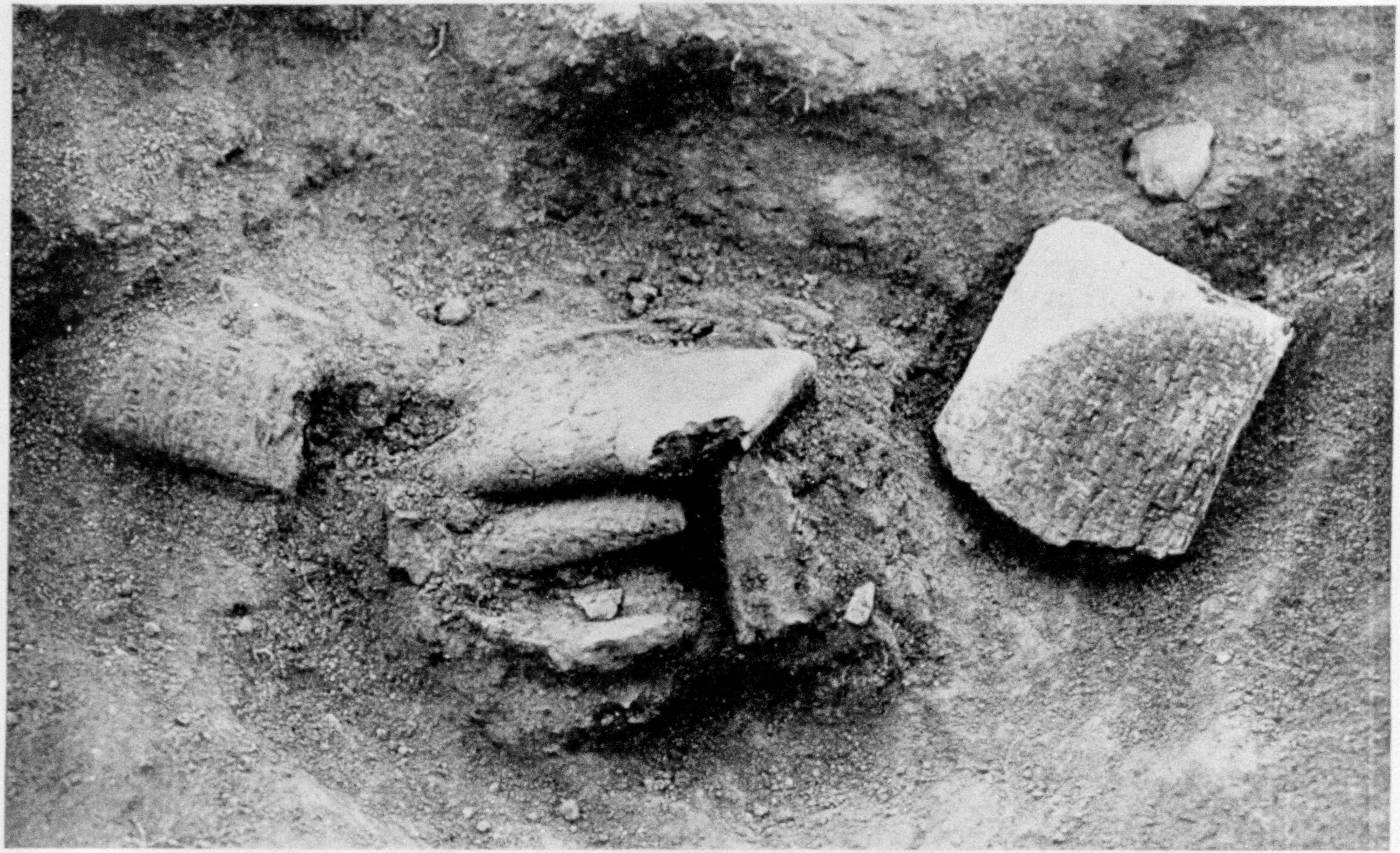
At the foot of the steps (see illustration, page 504) was this two-handled treasure, probably Egyptian in origin, for its lines are similar to those of vases removed from the tombs of the Pharaohs of the 19th dynasty (see, also, text, page 503). At the right, next to a painted Mycenæan vase, is the skull of a young man, probably that of a servant sacrificed at the burial of his royal master.

buried it again, this time under my cot. The days flew by. Owing to the heat, we worked from 4 o'clock in the morning until 10 a. m. and from 3 p. m. until evening. At noon the heat was almost unbearable and it was a relief to bathe in the near-by bay.

The Syrian summer was advancing rapidly. I could not afford to lose time, and therefore temporarily discontinued excavations in the royal necropolis in order to carry out the second part of my program, which was to find the ruins of the ancient seaport of Minet-el-Beida.

Thorough examination of the strata of Ras Shamra (see text, page 488) led me to conclude that the city must have stood on this hill. But where was the palace in which had resided the kings whose tombs we had discovered? I decided to start my excavations on the highest point of the hill, where I had noticed a few traces of walls among the shrubs.

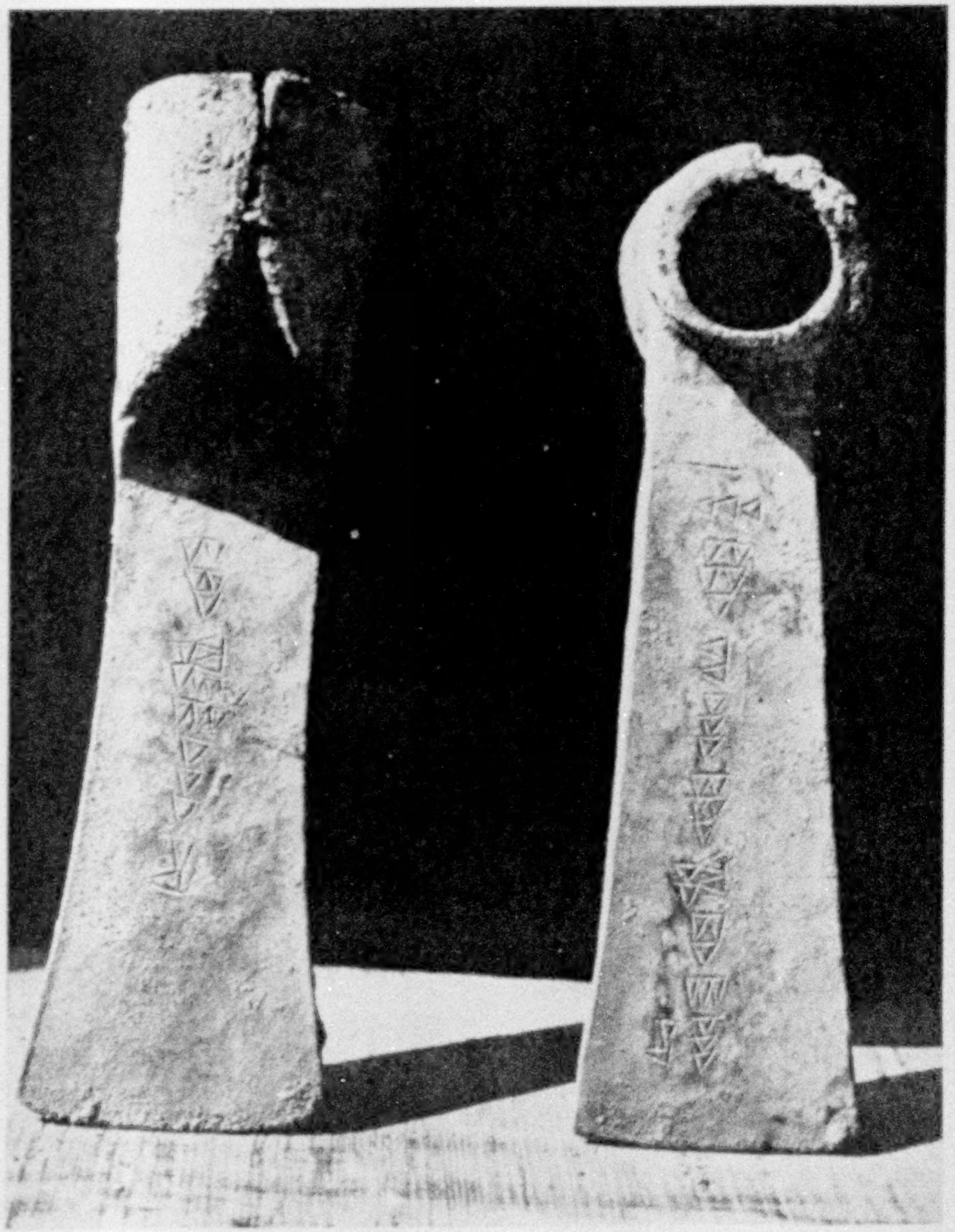
The choice was fortunate. Below the upper layer of shapeless, weather-worn rocks hewn stones came to light. Somewhat deeper still we laid bare the foundation of a large building which must have



Photograph from Prof. F. A. Schaeffer

SEVERAL OF THE CUNEIFORM TABLETS AS THEY WERE FOUND IN THE GROUND

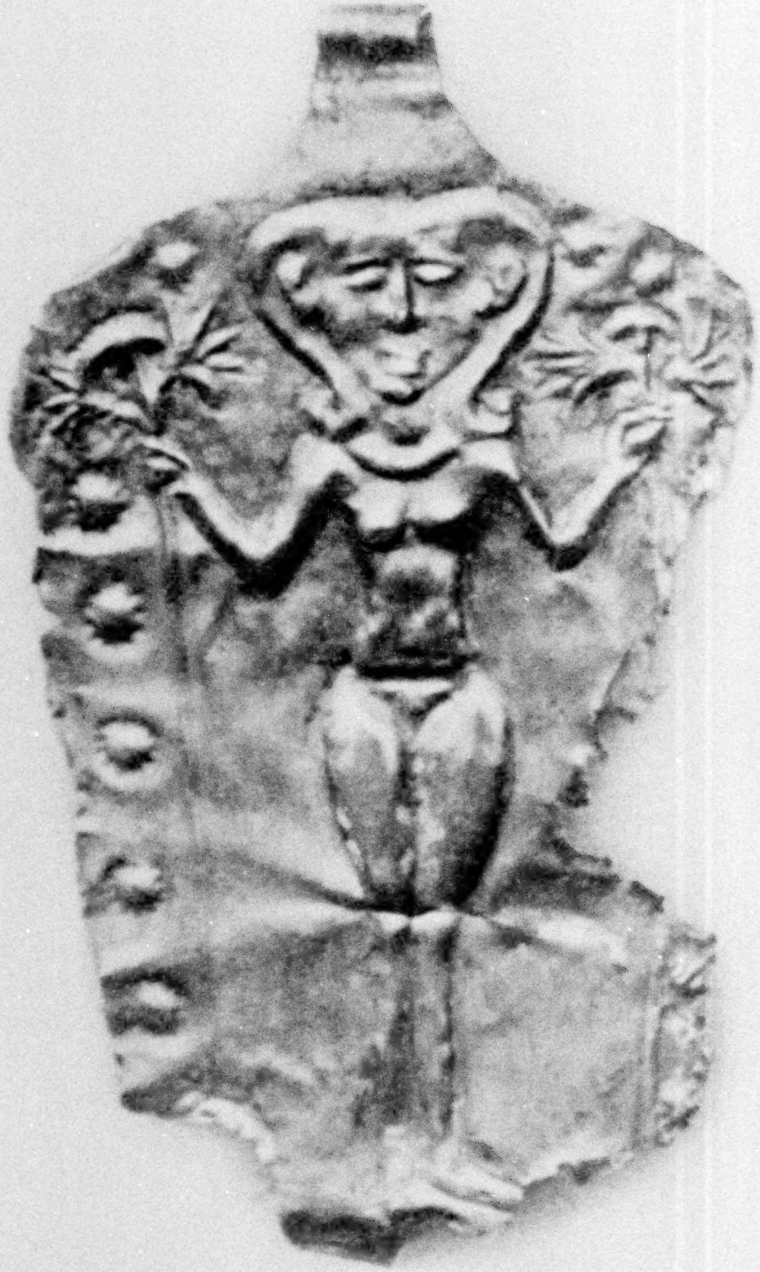
They lay in piles one upon the other, just as they once rested on shelves in the library.



Photographs from Prof. F. A. Schaeffer

BRONZE WEAPONS INSCRIBED IN CUNEIFORM

Probably the inscriptions are property marks of one of the kings of Ras Shamra (see, also, text, page 514).



THE GOLDEN PENDANT OF ASTARTE

The beautiful relief shows the Phœnician goddess of love holding lotus flowers in each hand (see, also, text, page 501).

Photograph from Prof. F. A. Schaeffer

ONE OF THE MIGHTY CENTER PILLARS OF THE PALACE

Next to it sits the youngest of the Alaouite workers, a wide-awake shepherd boy whose keen eyes discovered many a treasure.

been destroyed by fire, for ashes lay thick between the walls and blackened the hands of our workmen. Between the stones of a partly caved-in pillar were jammed a bronze dagger twisted by the fire and a nail of the same metal. They belonged to the same period as the royal tombs. Doubtless we had found the first traces of the royal palace on the hill of Ras Shamra!

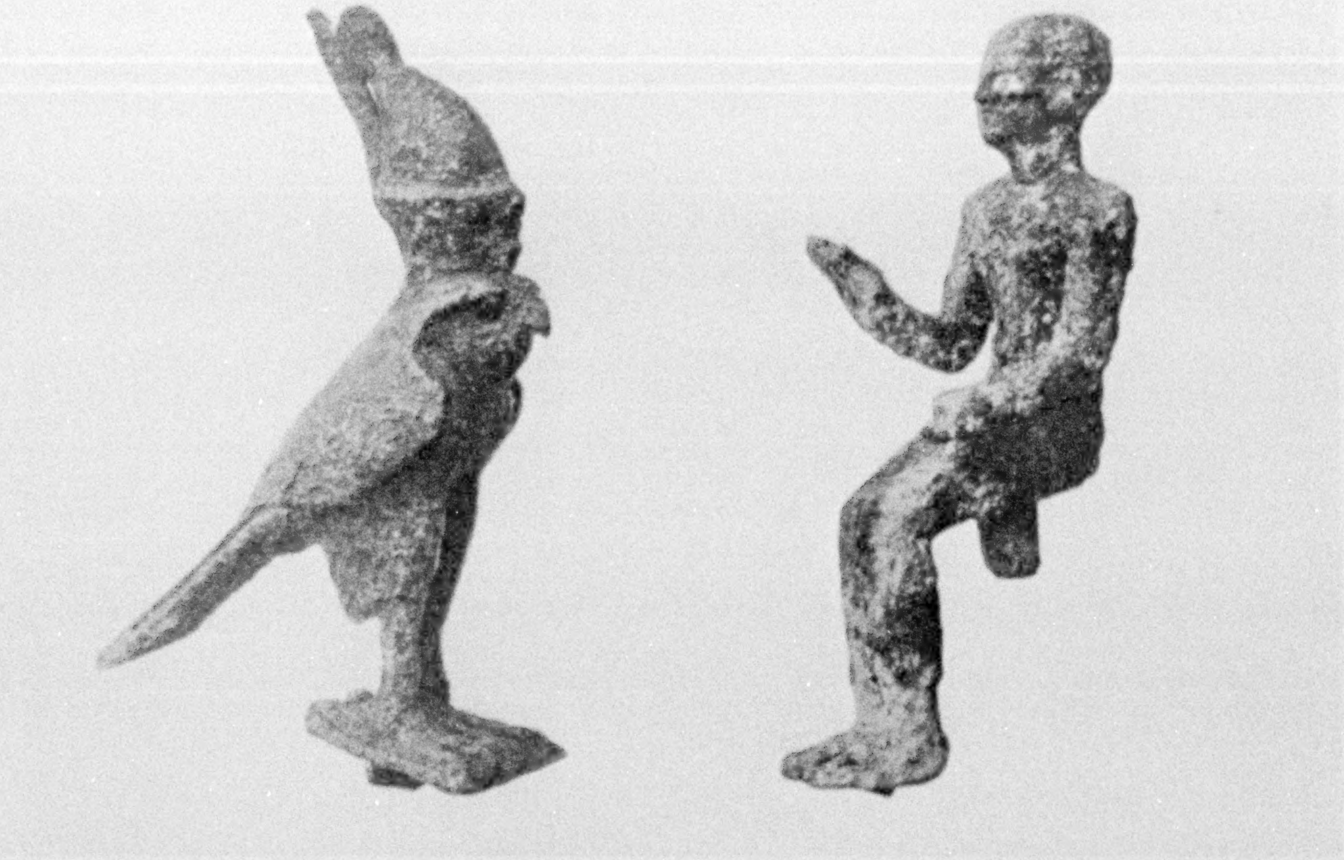
Between the caved-in walls of a large room lay the fragments of a life-size statue of an Egyptian Pharaoh of about the time of Tutankhamen. Not far from it were several tablets inscribed with hieroglyphics, one of which mentioned the Egyptian god Set. Probably the kings of the palace of Ras Shamra were friends or even allies of Egypt—an important point in Syrian history.

To get an idea of the size and construction of the royal palace, I had the earth removed in a large circle at some distance from the first excavation, and struck the palace walls. But the most significant find was a series of small rooms reminiscent of the storerooms in the royal palaces of Knossos and Phæstos in Crete. I concentrated my main activities upon this part of the excavation, because here we could expect discoveries that might give us a great deal of information.

### AN UNKNOWN LANGUAGE IN AN EARLY ALPHABET

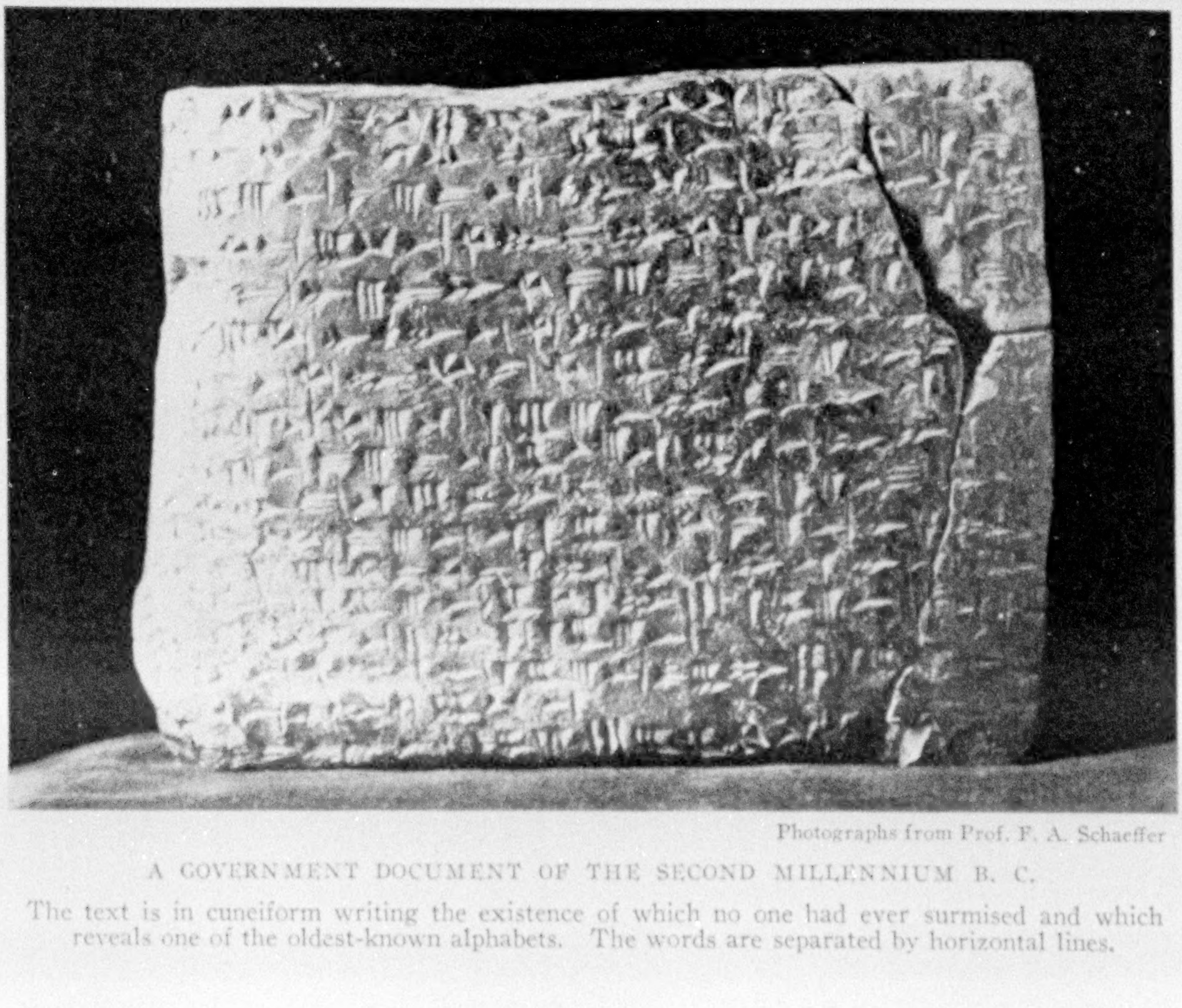
In a room divided by three pillars we came upon a large number of clay tablets covered with cuneiform text. We had found the palace library! These writings promise to reveal most valuable information concerning the history of the ancient Near East. Some are written in Babylonian, the diplomatic language of that time, and deal with important government treaties. One provides for the exchange of prisoners of three previously unknown cities on the Mesopotamian boundary: Hazilu, Halbini, and Panashtai.

But, to our amazement, we found that the majority of the tablets had been inscribed in a language the existence of which no one had ever surmised! And—an extraordinary thing—it is in an *alphabetical* script of 27 cuneiform signs, a



TWO GODS OF ANCIENT SYRIA

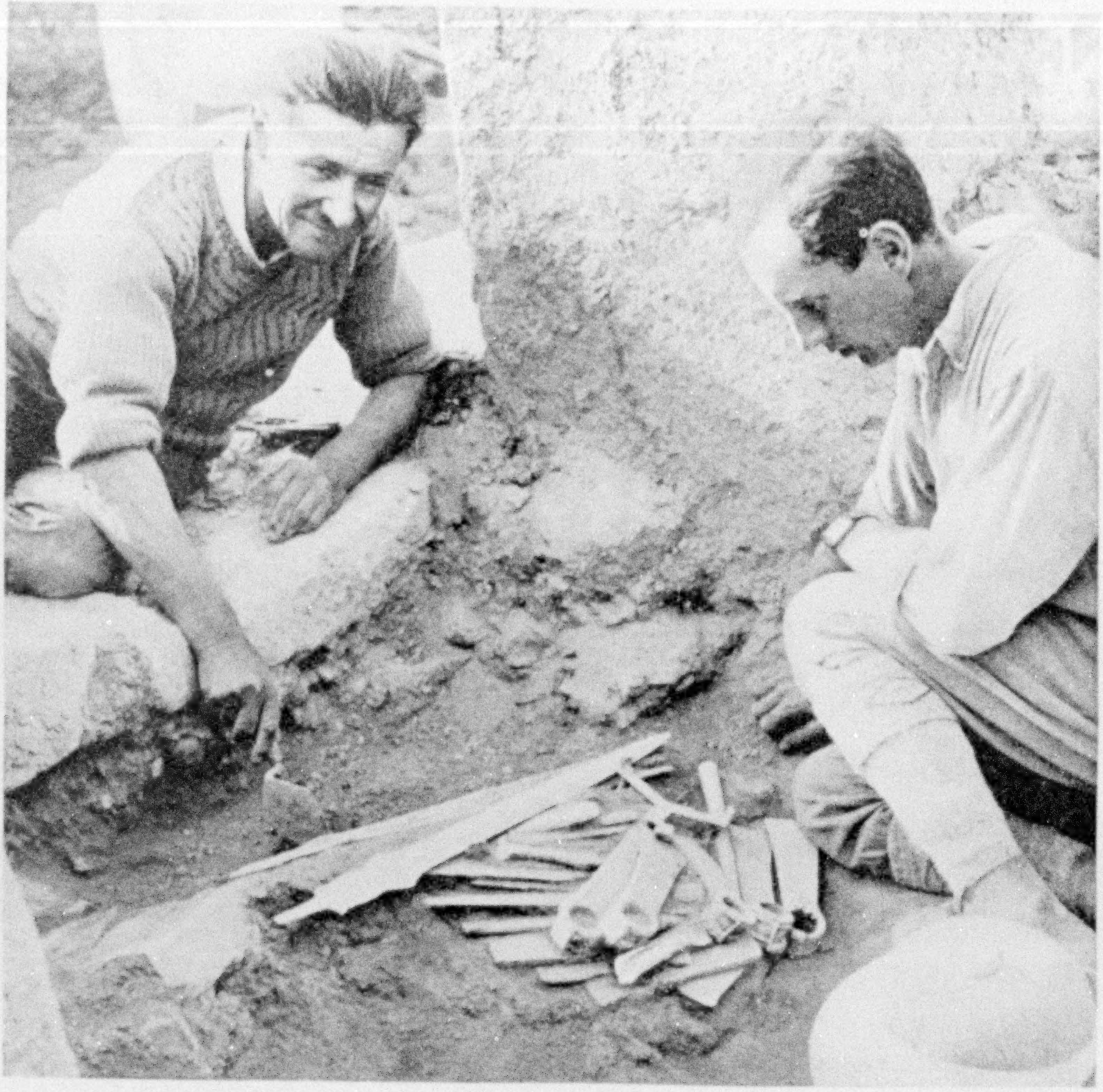
To the left is the bronze hawk god, Horus (see, also, illustration, page 499), wearing the pschent, or double crown of Upper and Lower Egypt. The seated figure at the right is that of a youthful god with an Egyptian profile, though the gesture of the raised hand is not Egyptian. His eyes are incrusted in silver and enamel.



Photographs from Prof. F. A. Schaeffer

A GOVERNMENT DOCUMENT OF THE SECOND MILLENNIUM B. C.

The text is in cuneiform writing the existence of which no one had ever surmised and which reveals one of the oldest-known alphabets. The words are separated by horizontal lines.



Photograph from Prof. F. A. Schaeffer

FINDER'S LUCK!

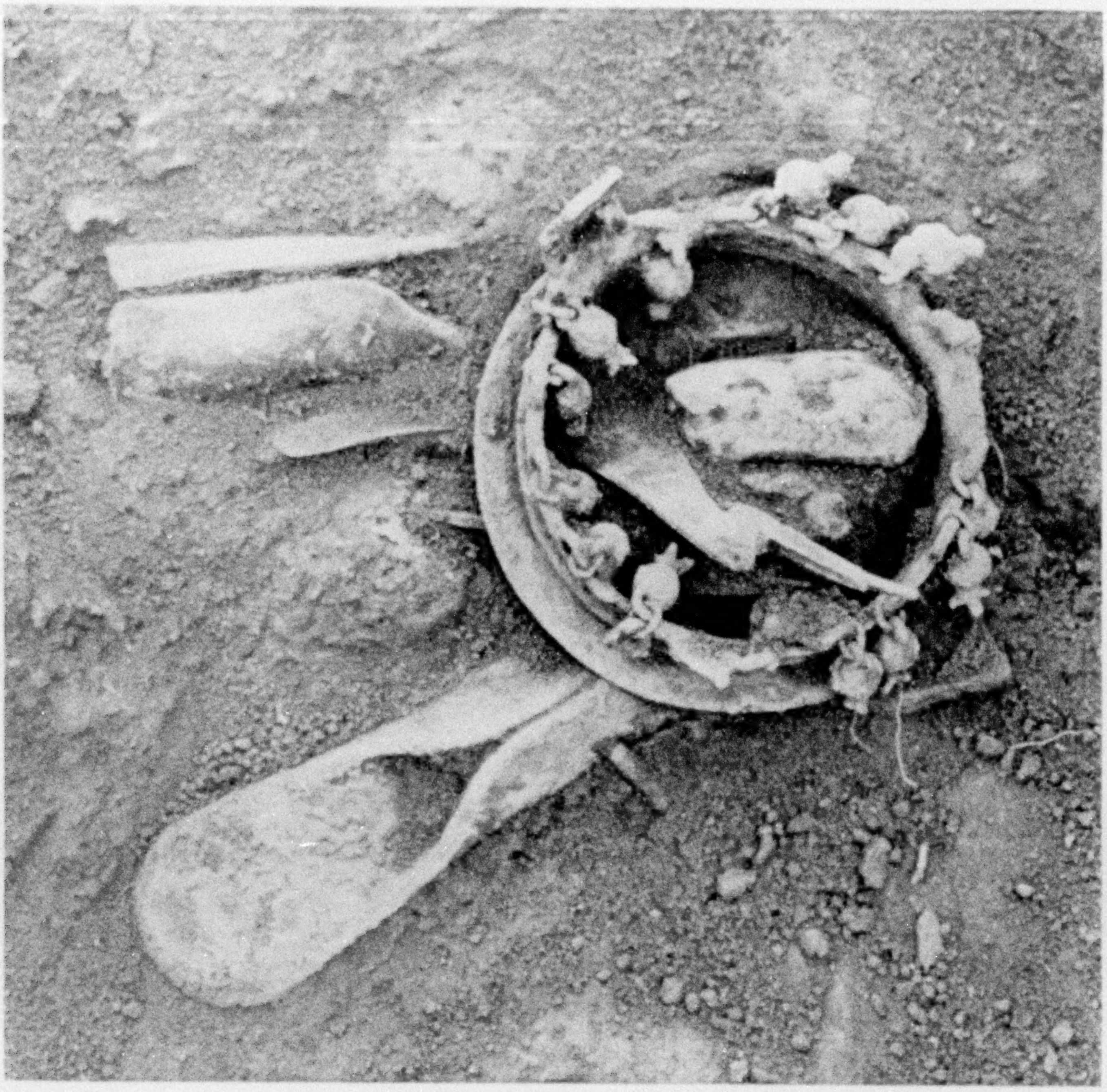
This treasure of 74 bronze weapons and tools, well preserved, consists of swords, flat axes, hoes, drills, and other objects. Since none are alike, they constitute a real "sample set" of certain weapons and tools in use more than 3,000 years ago. To the right is the author, leader of the expedition; to the left, his assistant, M. G. Chenet (see, also, text, opposite page).

real alphabetical document of the second millennium before Christ! (511).

Up to now the origin of an alphabet, probably the most wonderful achievement of the human mind, has been considered of much more recent date. Only through this instrument did writing, reading, and, with these, the entire field of knowledge, become accessible to the masses. Prior to this development, only priests and rulers, after a long period of study, could fathom the mysteries of Egyptian hieroglyphics and Babylonian ideographs, with which weapons they were assured of their power over the ignorant masses.

Believing that the notations of the Greek historian Herodotus were correct, many scholars have praised the Phœnicians as the inventors of the alphabet. Our discovery indicates, however, that, long before the Phœnicians, the kings of Ras Shamra used a genuine alphabetical script for their diplomatic correspondence. People have racked their brains, wondering with what signs Moses wrote his Tablets of the Law; he may have had an alphabet.

We took every precaution to safeguard these precious historic documents. Among them are large tablets recording government treaties and very small ones contain-



Photograph from Prof. F. A. Schaeffer

THIS WAS A GRACEFUL TRIPOD 3,000 YEARS AGO

It was found with the deposit of 74 tools and weapons (see illustrations, pages 509 and 512). Suspended from it are little bells shaped like pomegranates.

ing the personal correspondence of the kings. The position in which each tablet was found in the earth was photographed, and their removal filmed (see page 508).

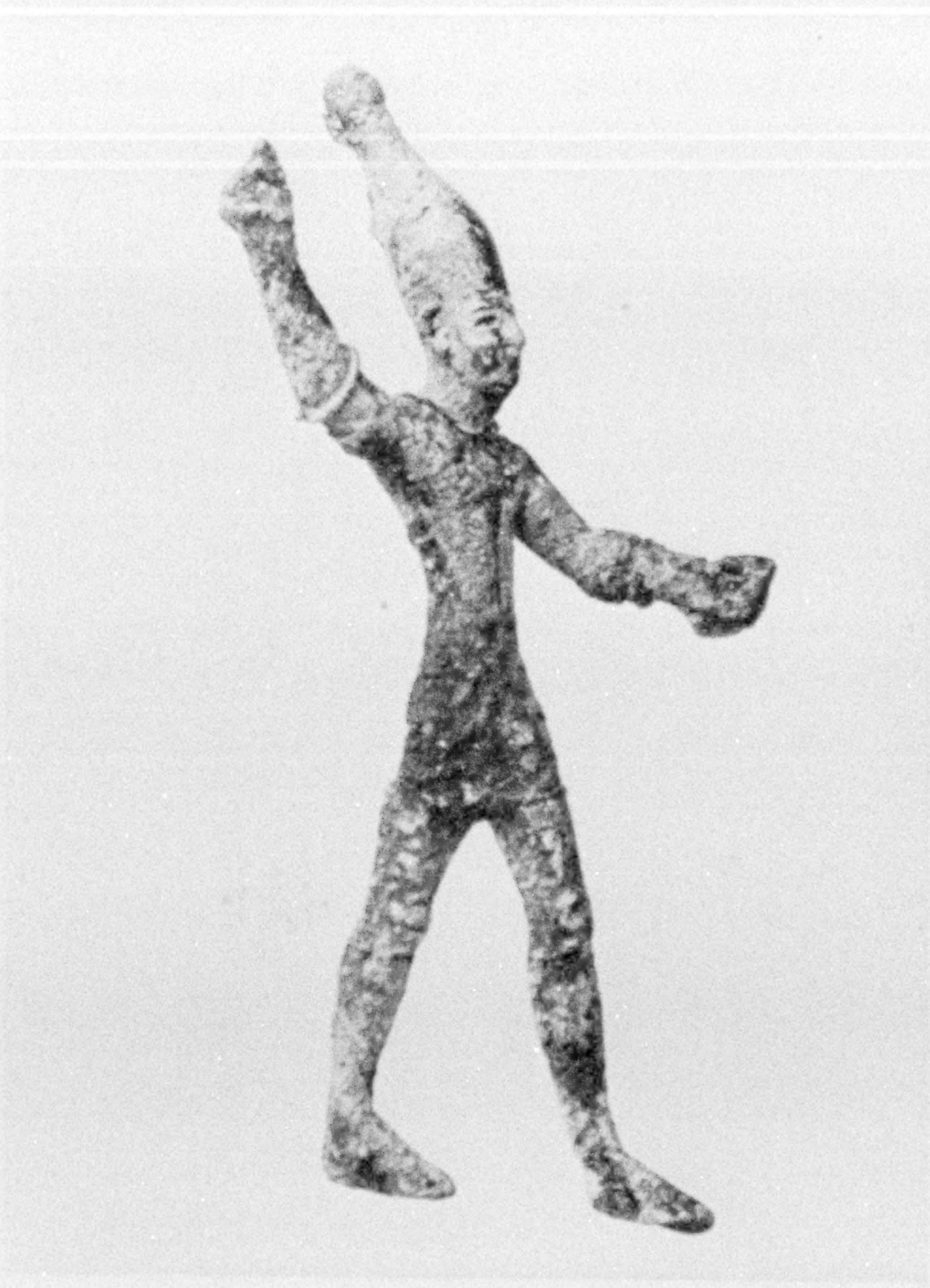
I sent a messenger to Latakieh to request the presence of the Governor and the Minister of Finance of the State of the Alaouites as witnesses to the discovery. They came in two days; then I removed several additional tablets in their presence. Telegraphic information of this discovery sent to the Academy in Paris brought congratulations by radio and letters from England and America.

We had not yet recovered from the nervous strain of this discovery before our entire attention was focused upon a new one of great significance.

### A TREASURE OF TOOLS AND WEAPONS

At the foot of a cellar stairway we came upon a pile of bronze weapons and tools unusually well preserved. If they had not been covered with patina, formed during their thousands of years of burial under the ground, one would have supposed that they had just come out of the shop of the forger.

This treasure contains 74 pieces, including four large bronze swords nearly three feet long, 11 lances of various shapes, 27 flat axes, 14 large hoes, two pretty



Photograph from Prof. F. A. Schaeffer

THE FINEST EFFIGY EXTANT OF THE GOD RESHEF

The Phœnician war and weather god wears a high, gold-plated cap which resembles the Egyptian pschent (see, also, illustration, page 511), a mask of gold, and a cuirass of silver (see, also, text, page 501).

daggers with inlaid handles, four sickles, nine chisels and drills, and a graceful tripod with little bells shaped like pomegranates suspended from it (see page 513).

These objects were all of different patterns. They may be considered as a "sample set" of bronze weapons and tools used more than 3,000 years ago. What makes them especially valuable is the fact that a number of the most beautiful bear engraved inscriptions whose meaning is still unknown, for they are written in the same mysterious cuneiform characters which appear on some of the tablets. Probably they are property marks of one of the kings of Ras Shamra (page 509).

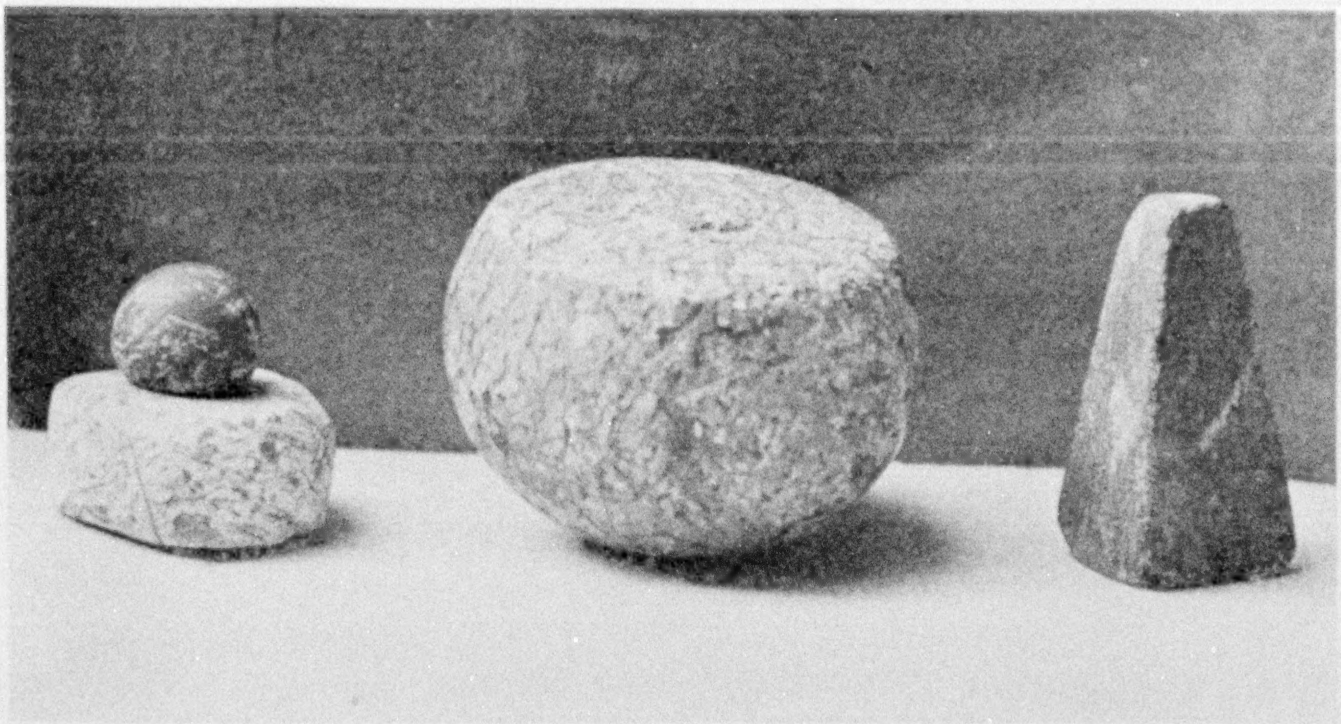
The removal of this treasure was recorded in motion pictures, the work lasting several days under the Syrian sun.

In the meantime June had come. Only in the morning before sunrise and late in the evening was the temperature bearable. Even the natives showed signs of exhaustion. I decided to bring the excavations to a close, especially since I was eager to get the valuable objects into a place of safety. Bandits were active near the boundary and had killed a French archeologist who resisted robbery.

To protect the palace against treasure-seekers during our absence, I ordered the shafts closed again, and also established a guard post on the hill to remain throughout the winter, until we could resume our excavations in the spring.

For the transportation of our treasures—some of them extremely fragile—I renounced the country road and hired a Syrian sailboat to take them, without knocks and jolts, to Latakieh. The boxes, trunks, and tents filled the vessel to the gunwales. Not far from the beacon fire of the peninsula of Ibn Han we encountered a hard wind, and the seamen had to do their utmost to protect the boxes from the water that threatened to dash over the boat. Realizing that we could stay out no longer without being in serious danger, I gave orders to the captain to look for a near-by bay where we could spend the night.

This was not a comforting decision to have to make; for, in the expectation



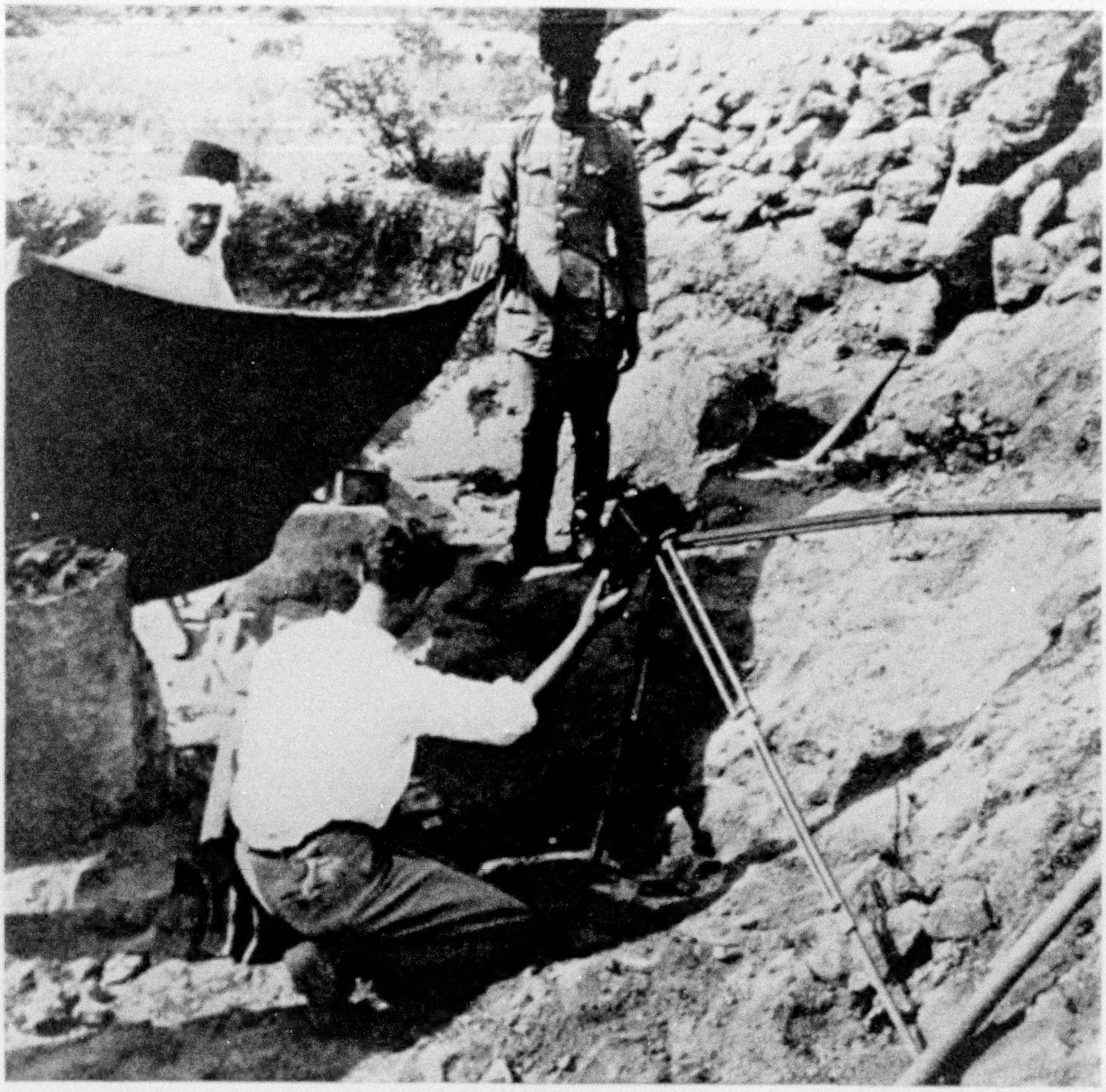
STONE WEIGHTS LINK SYRIA WITH EGYPT

These funerary deposits at Minet-el-Beida show Egyptian influence, in that the large stone weight in the center is the equivalent of the Egyptian *mina,* while the others are fractions of it (see, also, text, page 499).

Photographs from Prof. F. A. Schaeffer

FRENCH OFFICIALS EXAMINE THE CUNEIFORM ARCHIVES OF THE PALACE LIBRARY

The archeologists requested the presence of the Governor (left) and the Minister of Finance (center) of the Alaouite State as witnesses to the discovery of the history-making tablets (see pages 508 and 511). To the right is the expedition's assistant, M. G. Chenet.



Photograph from Prof. F. A. Schaeffer

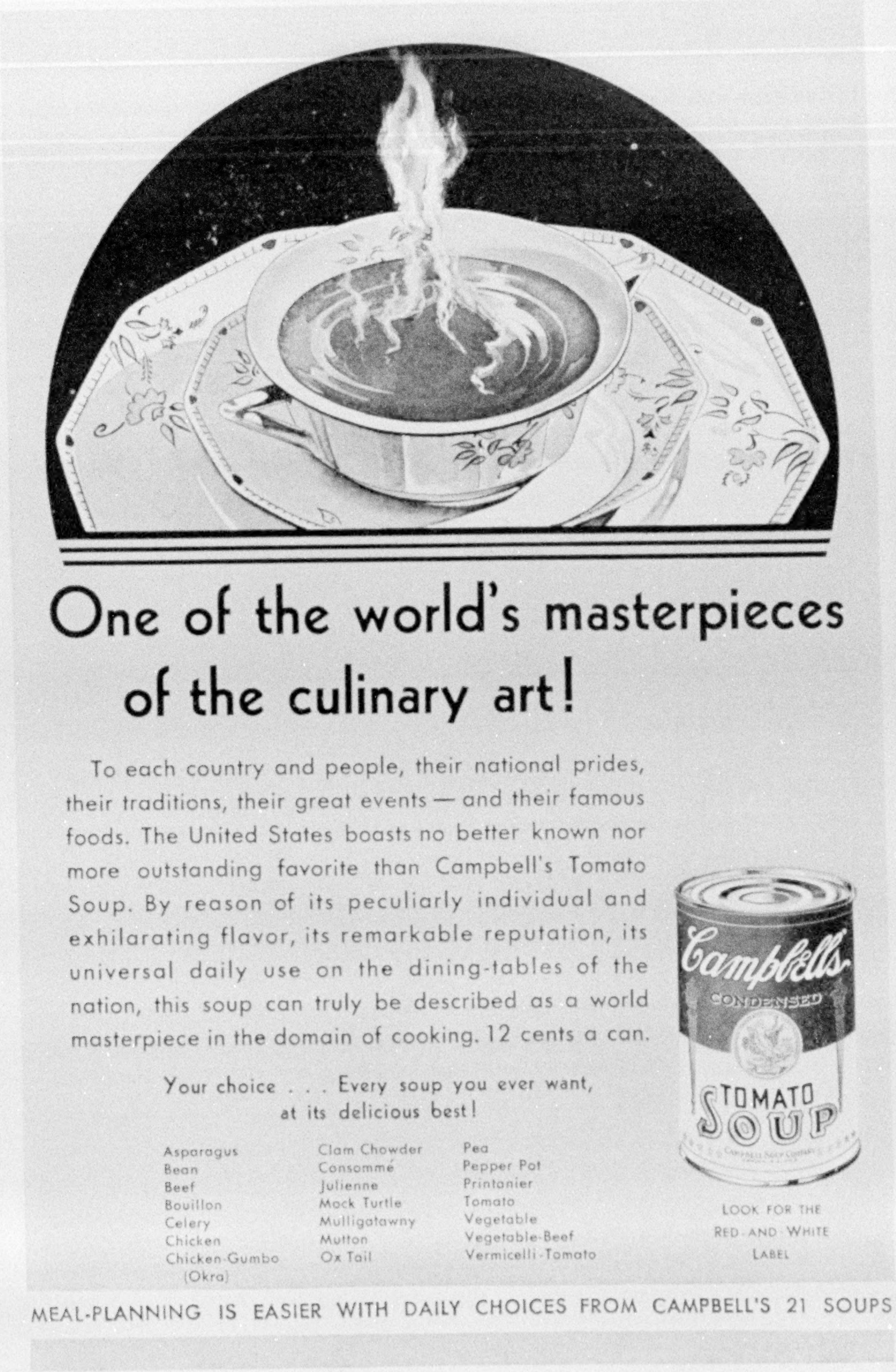
THE CAMERA BEARS WITNESS TO DISCOVERIES

The various treasures were photographed in their original position in the ground, and the actual removal from their resting places was recorded by the motion-picture camera.

that we would have a smooth trip, I had not taken any armed soldiers along. Chenet and I stood guard over the treasures during the night. The sailors prepared for us a supper of grain gathered in near-by fields and roasted over the fire. After supper they lay down to sleep.

About 2 o'clock loud shouts rang through the dark, the calls of some Syrian horsemen who had been looking for us. When we did not arrive at Latakieh the previous night, it was feared we had met with an accident, and horsemen had been sent out to search the coast. The next day the sea was calm and we terminated our journey without interruption.

After being temporarily exhibited in the hall of the palace in Latakieh, our treasures were carefully packed in boxes and taken to Beyrouth in two automobiles. From there I shipped them to France by diplomatic courier.


Campbell's
CONDENSED
TOMATO
SOUP

# One of the world's masterpieces of the culinary art!

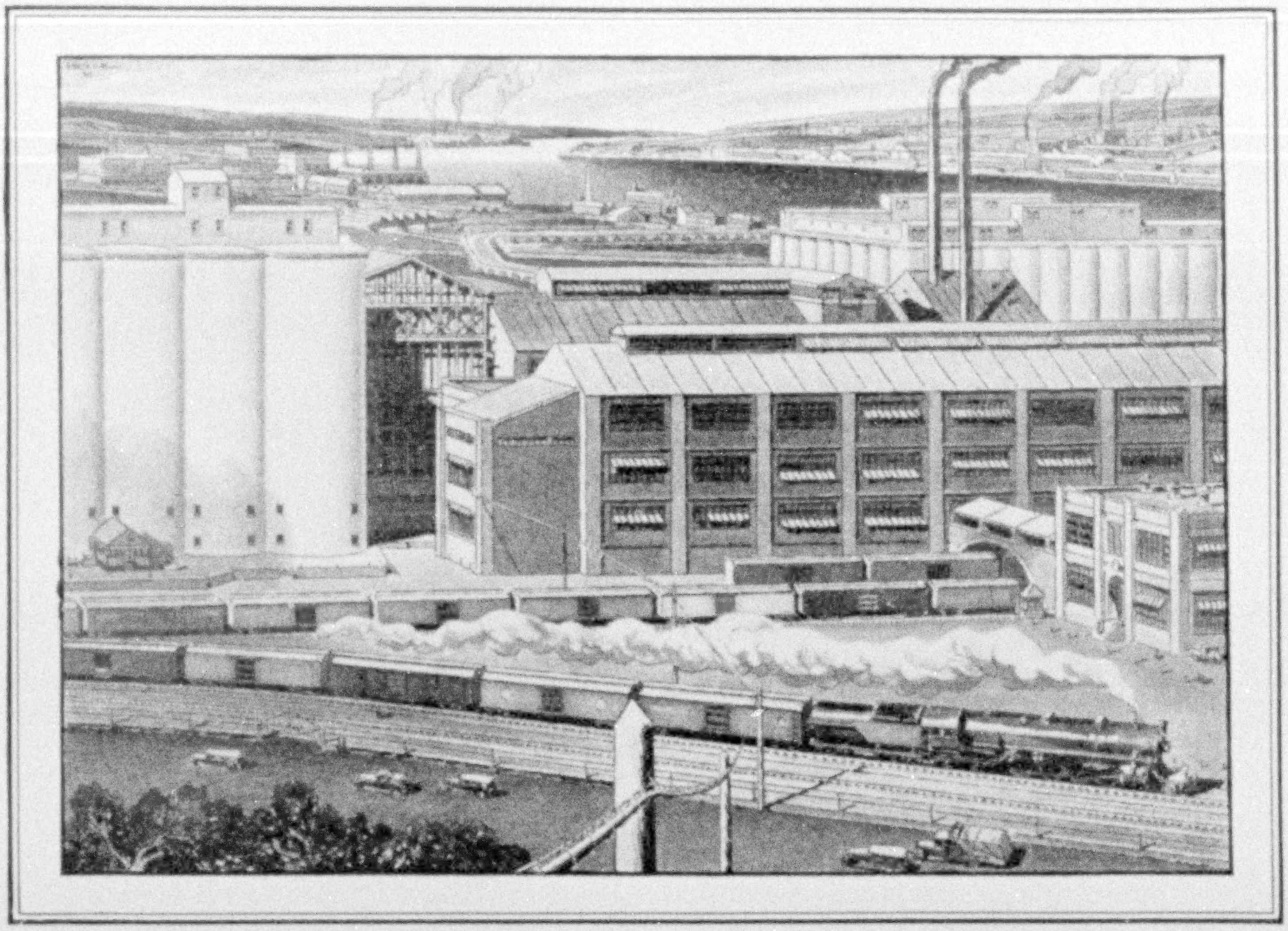
To each country and people, their national prides, their traditions, their great events — and their famous foods. The United States boasts no better known nor more outstanding favorite than Campbell's Tomato Soup. By reason of its peculiarly individual and exhilarating flavor, its remarkable reputation, its universal daily use on the dining-tables of the nation, this soup can truly be described as a world masterpiece in the domain of cooking. 12 cents a can.

Your choice . . . Every soup you ever want,
at its delicious best!

Asparagus
Bean
Beef
Bouillon
Celery
Chicken
Chicken-Gumbo (Okra)
Clam Chowder
Consommé
Julienne
Mock Turtle
Mulligatawny
Mutton
Ox Tail
Pea
Pepper Pot
Printanier
Tomato
Vegetable
Vegetable-Beef
Vermicelli-Tomato

LOOK FOR THE
RED-AND-WHITE
LABEL

MEAL-PLANNING IS EASIER WITH DAILY CHOICES FROM CAMPBELL'S 21 SOUPS



# Giants out of the earth

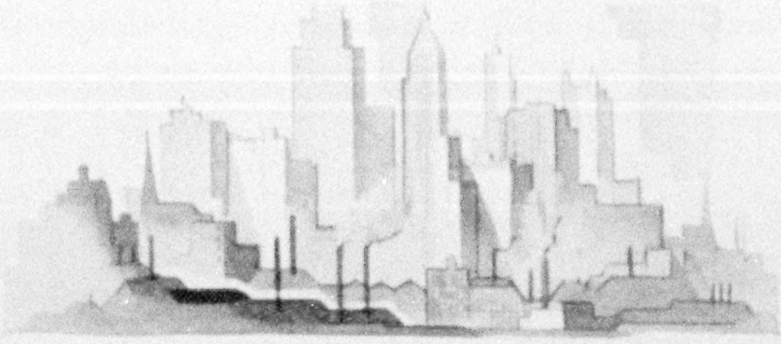
*An Advertisement of the American Telephone and Telegraph Company*

No age but ours has seen so swift and complete an application of natural forces to the doing of daily tasks. Man's leaping knowledge . . . embodied in industrial plants and laboratories, airplanes and electric locomotives . . . has won new power and freedom. Machines are the symbols of a new relationship with nature. They are the servants of this civilization . . . helping men to extend the limits of their opportunities, to change the character of their life.

Americans have been pre-eminent in this change, for in whatever they do they seek to utilize nature to the utmost. They have taken the power out of the earth and from the running streams. They have made it turn the wheels of their industry and move their products by rail and road. They have made color and variety out of chemistry. They have spun metal in slim wires to carry their voices anywhere with the speed of light . . . and make neighbors of the scattered millions of America.

Joining homes and work places, towns and distant cities, the Bell Telephone System has furnished a new communication for this new age. Forwarding the growth of the nation, giving better and more complete service in advance of the demand, its function has become the indispensable one of furnishing the means of social and business contacts in crowded cities and scattered villages over the length and breadth of a continent.

The Bell System is constantly improving the scope, speed and accuracy of its service. Its work of contributing to the welfare and prosperity of American life goes on with increasing purpose and pace.



## *"Take charge of the Middle West next week"*

A district manager for an Eastern shoe company was promoted to a bigger job. His salary increased. His surplus for investment increased.

But, his executive duties also increased. Between sales meetings, road trips and office work, he could devote less attention to his own holdings. Formerly he had "shopped around" among different investment houses. Would he save time and trouble by dealing with a single large investment organization?

## WHAT he will find in National City service

CONVENIENT OFFICES. National City offices throughout the world are at his command.

INVESTMENT EXPERIENCE. He will be dealing with an organization with a background of over a century of financial experience.

MARKET CONTACTS. National City offices are in close touch with all investment markets.

INVESTMENT RANGE. National City's broad lists are made up from the world's finest investment offerings.

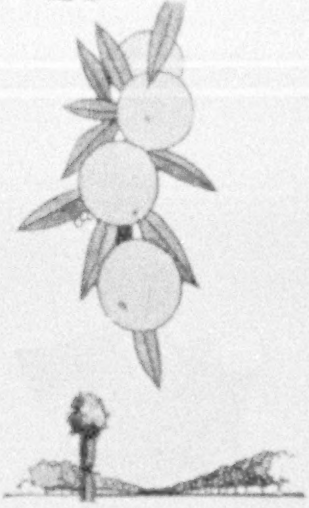
Whatever *your* investment problem may be, you will find practical and prompt assistance at your nearest National City office.

# The National City Company

NATIONAL CITY BANK BUILDING, NEW YORK

INVESTMENT SECURITIES

# Name the winter vacation you want ...you will find it here



*Looking toward China*

*Swimming at Palm Springs*

SOUTHERN CALIFORNIA makes vacations to your order. No other single area offers this *variety* of vacation attractions.

Ocean? There's the friendly Pacific ... its sandy beaches for relaxation ... its blue waters for smooth sails to nearby playground isles.

Desert? Palm Springs is an oasis that draws smart travelers from all the world, to bask in day-long sunshine.

Mountains? Snow-peaks and mile-high lakes are within a morning's drive.

Foreign atmosphere? Old Mexico is very near. Its influence and that of the Old Spanish Missions is seen at every turn.

Sports? You'll find them all, at their sportiest, in new and thrilling settings.

Gaiety? Get acquainted with Hollywood's cafes, theatres, "first-nights," and galaxy of world famous orchestras and entertainers.

Because Southern California is a year 'round vacation-land you escape the "peak prices" necessary in short-season resorts. Ample accommodations. In fact, U. S. government figures show that costs of food, rent, fuel and light here are 15.2% less than the national average. These basic factors indicate that your costs while here may easily be no more than at home!

costs need not exceed

**$215**

a month --- while here

SEND FOR NEW FREE WINTER ITINERARY

A month's stay, for instance, including hotels, meals, sightseeing trips, sports, etc., need cost no more than $215 while here.

We have prepared a suggested itinerary for such a visit, outlining just what you can see and do. Includes dozens of interesting gravure photographs of Southern California scenes, map, information about routes, and itemized daily cost figures. Send the coupon now for your free copy of this remarkable book.

If you wish *another* beautiful Southern California book—containing 71 large gravure photographs, send 4c to cover mailing cost.

*Ancient Spanish Missions . . . foreign "color"*

*All-Year Club of Southern California, Div. 10-P, 1151 S. Broadway, Los Angeles, Cal.*

(Check if desired). ☐ Please send me *free* one-month's Illustrated Winter Itinerary with itemized figures on costs while in Southern California.

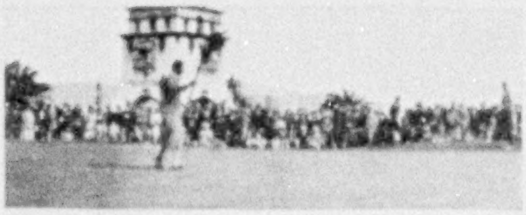
(Check if desired). ☐ 4c in stamps (postage cost) enclosed. Send "Southern California through the Camera." Also send *free* booklets about counties checked.

| | | | |
|---|---|---|---|
| ☐ Los Angeles | ☐ Orange | ☐ Santa Barbara | ☐ San Bernardino |
| ☐ Los Angeles Sports | ☐ Riverside | ☐ Ventura | ☐ San Diego |

*Name* ______ *Street* ______

(Please Print Your Name and Address)

*City* ______ *State* ______

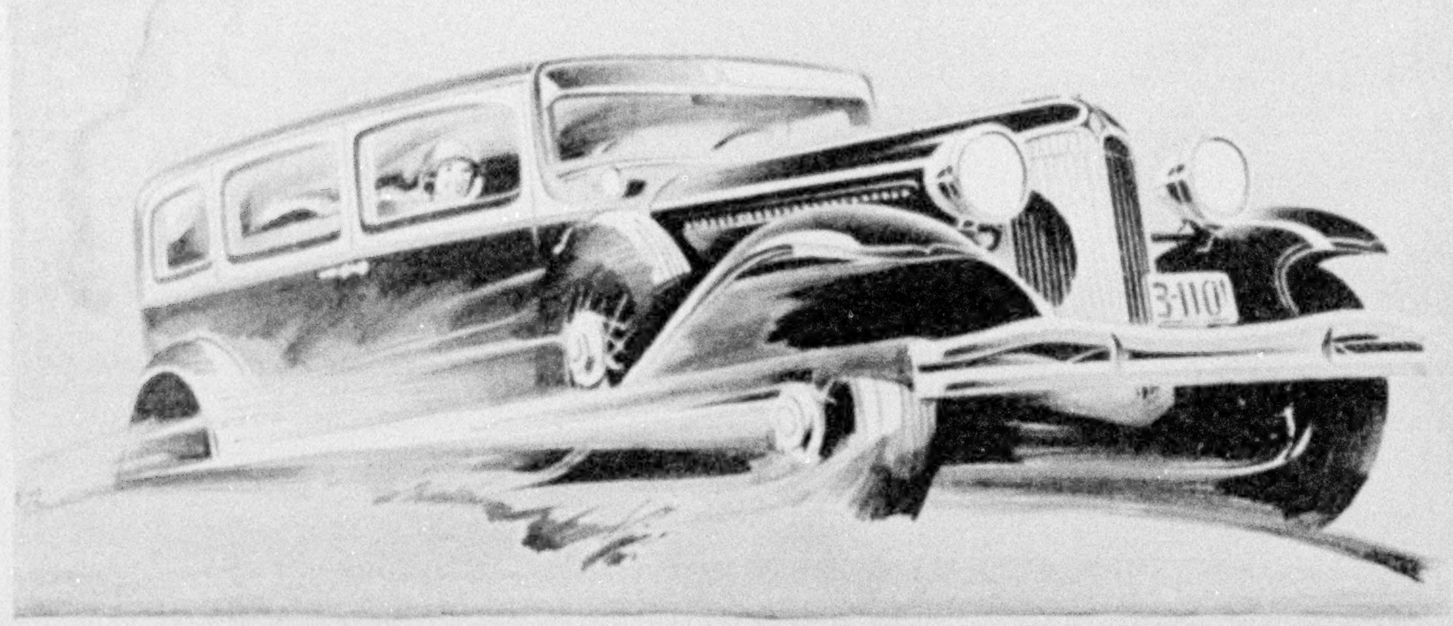


*Outdoor sports all winter long*

EXECUTIVES and INVESTORS: Los Angeles County oil fields represent an investment of 750 millions. Agriculture over 400 millions. The port of Los Angeles is second only to New York in volume of export tonnage.

## SOUTHERN CALIFORNIA

# CHRYSLER
## NEW STRAIGHT
# EIGHTS

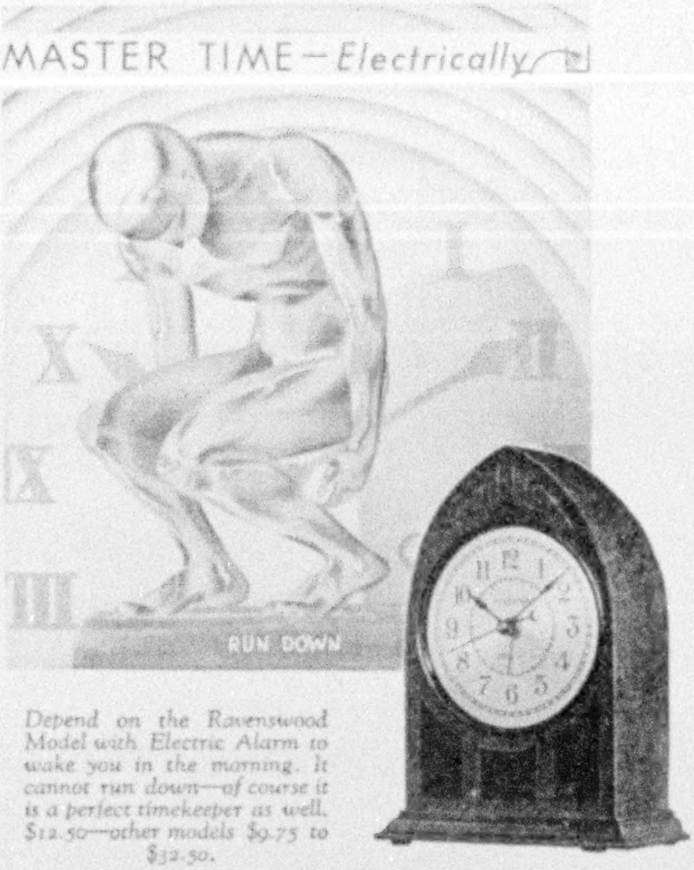


CHRYSLER EIGHT SEDAN, $1525 (*wire wheels extra*)

Two Straight Eights . . . Chrysler Eight and Chrysler Imperial Eight . . . Eights of dynamic modern beauty and smartness . . . Eights of spectacular power and speed . . . Eights that introduce brand-new degrees of flexibility and smoothness . . . Eights with Chrysler 4-speed transmission and Multi-Range gear shift, providing two high-gear speed ranges . . . Eights with the famous Chrysler weatherproof internal hydraulic brakes . . . Eights so low they fairly hug the ground, yet with no sacrifice of inside roominess . . . Eights engineered, built and appointed with the most exacting care and precision . . . Eights so moderate in price that we believe they set a new measure of eight-cylinder value . . . Eights every motoring enthusiast should lose no time seeing and driving.

Chrysler Eight and Imperial Eight closed cars are factory-wired for immediate installation of Transitone, the pioneer automobile radio. Other models will be equipped on order.

CHRYSLER EIGHT—Standard Models—Roadster $1495; Coupe $1495; Sedan $1525;—Special Coupe $1535; Special Sedan $1565; Special Convertible Coupe $1665; Sport Roadster (6 wire wheels and trunk rack) $1595. All prices f.o.b. factory. CHRYSLER IMPERIAL EIGHT—5-Passenger Sedan $2495; Close-Coupled Sedan $2595; 7-Passenger Sedan $2695; Sedan-Limousine $2895. All Imperial prices include choice of six wire or demountable wood wheels, fender wells trunk rack, bumpers and specially-painted fenders. All prices f.o.b. factory.



*Depend on the Ravenswood Model with Electric Alarm to wake you in the morning. It cannot run down—of course it is a perfect timekeeper as well. $12.50—other models $9.75 to $32.50.*

## All-Electric Clocks Never Run Down!

THERE are no springs in the all-electric clock . . . no winding to bother about . . . and, of course, having no springs the Hammond All-Electric Clock can never run down.

Your home is timed exact-to-the-second with *this* modern timekeeper. Yet it is never necessary to regulate the Hammond Clock. It is constantly regulated by the same electricity that drives it. The cost of the current is less than ten cents a month.

Models are designed for every room in the home from kitchen to living room. Your department store, jeweler or electrical dealer will be glad to show them.

THE HAMMOND CLOCK COMPANY
2915 North Western Ave., Chicago, Ill. N-2
Please send me free descriptive literature giving the story of all-electric time and showing all your models.
Name............................................................
Address........................................................
City.................................................State..............

HAMMOND
ALL-ELECTRIC-CLOCKS

# South Africa

## A Travel Tour Unparalleled

A FAMOUS fair-weather sea trip to the charming Cape Peninsula . . . Historic landmarks . . . Luscious fruits . . . Gorgeous flowers . . . Surf-riding and sun-bathing at the gay seaside resorts of Muizenberg, East London, Port Elizabeth . . . Oudtshoorn . . . Herds of ostrich and weird Cango Caves . . . Rock paintings of ancient Bushmen . . . Kruger Park, world's greatest natural "Zoo" . . . Pretoria, with its associations of Oom Paul Kruger . . . Near by the great Premier Diamond Mine, largest man-made hole in the earth . . . Johannesburg, "City of Gold" . . . Durban, "Siren City" on the Indian Ocean, where East meets West . . . Prancing Ricksha Boys in bizarre costumes . . . Primitive Zulu kraals, witch doctors, fantastic ceremonies . . . Rhodes' Tomb on a granite hill of the Matopos . . . Zimbabwe's mysterious Ruins . . . The sublime glory of Victoria Falls . . . A superb climate, blue skies, golden sunshine, and a wondrous pageant of scenic beauty . . . Beautiful, progressive cities . . . Modern railroads and motor roads . . . Excellent hotels.

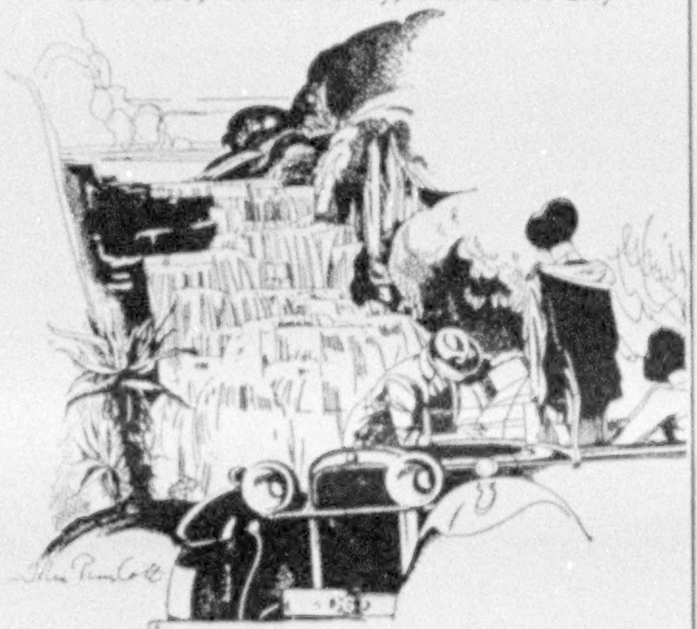
SPECIAL AROUND AFRICA CRUISE

*or independent tours—full information from Director*

*South Africa Travel Bureau*

*Dept. No. OD1*

*Room 657, 11 Broadway, New York City*



BROADWAY AND
FIFTH AVENUE AT
MADISON SQUARE,
NEW YORK

# AN INTERNATIONAL ADDRESS . . .
# THE FIFTH AVENUE BUILDING

New York City is the very heart of the world's business. To this great center come buyers from all parts of the world seeking products to be consumed thousands of miles away. . . . At the intersection of the two most famous of all New York's proud avenues, Fifth Avenue and Broadway, stands The Fifth Avenue Building, enjoying perhaps the world's best known address. . . . In this colossus are the offices and display rooms of leaders of world trade. Pottery, glass, laces, men's wear, women's wear, office equipment, toys, novelties, cards, stationery, and other products far too numerous to mention, are bought and sold within these walls. . . . The Fifth Avenue Building can be easily reached from any part of New York City. The Grand Central Station is a thirteen-minute ride by subway; Pennsylvania Station, ten. Busses and surface cars pass the doors. The shopping and financial districts are at either hand. . . . The address, 200 Fifth Avenue, faces Madison Square. This assures the offices an unusual amount of sunlight and air. A complete information booth and an attractive restaurant are among the many conveniences found here. . . . When in New York allow us to show you through.

## THE FIFTH AVENUE BUILDING

*"MORE THAN AN OFFICE BUILDING"*

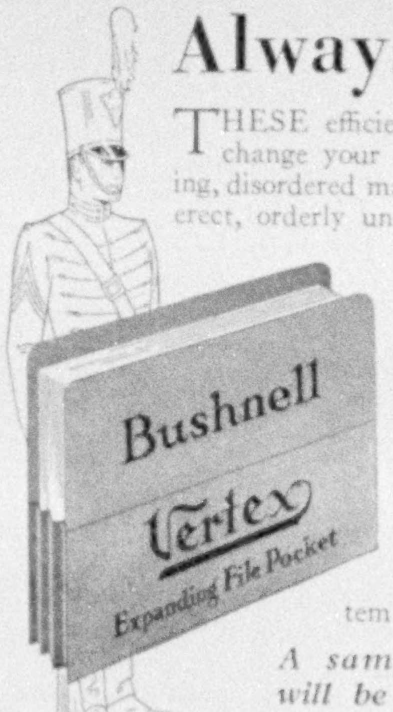
It's good business to use good letterheads

*Specify Genuine Engraving*

ENGRAVED STATIONERY MANUFACTURERS ASSOCIATION

ENGRAVED

*Look for this Mark of Genuine Engraving when you order letterheads, business cards, greeting cards or announcements!*



**Always Erect**

THESE efficient file pockets will change your files from a slumping, disordered mass to a succession of erect, orderly units with indexes always visible and contents easily accessible.

Try a "Vertex" File Pocket in the place of one of those overcrowded manila folders in your own filing cabinet and learn how your entire filing system can be improved.

*A sample pocket will be sent free to users of vertical files*

Please send me for trial in my files a free sample of the Bushnell Paperoid "VERTEX" File Pocket as described in October, 1930, National Geographic.

Name of Firm ........................................

Address ........................................

Name and Position of Person Inquiring ........................................

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Letter Size or Legal Size Desired? ........................................

To ALVAH BUSHNELL CO., Dept. G
13th and Wood Streets, Philadelphia

Bushnell
Vertex
Expanding File Pocket

Securing SECURITIES!

Signatures, endorsements and similar writing upon securities and other types of important documents deserve the utmost in permanence and protection.

Proof to age, air, heat, moisture and chemical eradicators, Higgins' Eternal Black Writing Ink proffers these essential requisites. Costing no more than other inks, it also imparts a jet black writing beauty and dignity which has caused it to be specified increasingly by discriminating individuals everywhere for business and personal use.

*Try it today and see its superiority!*

CHAS. M. HIGGINS & CO., Inc., 271 Ninth St., B'klyn, N.Y.
*Also makers of Higgins' American Drawing Inks for Half a Century*

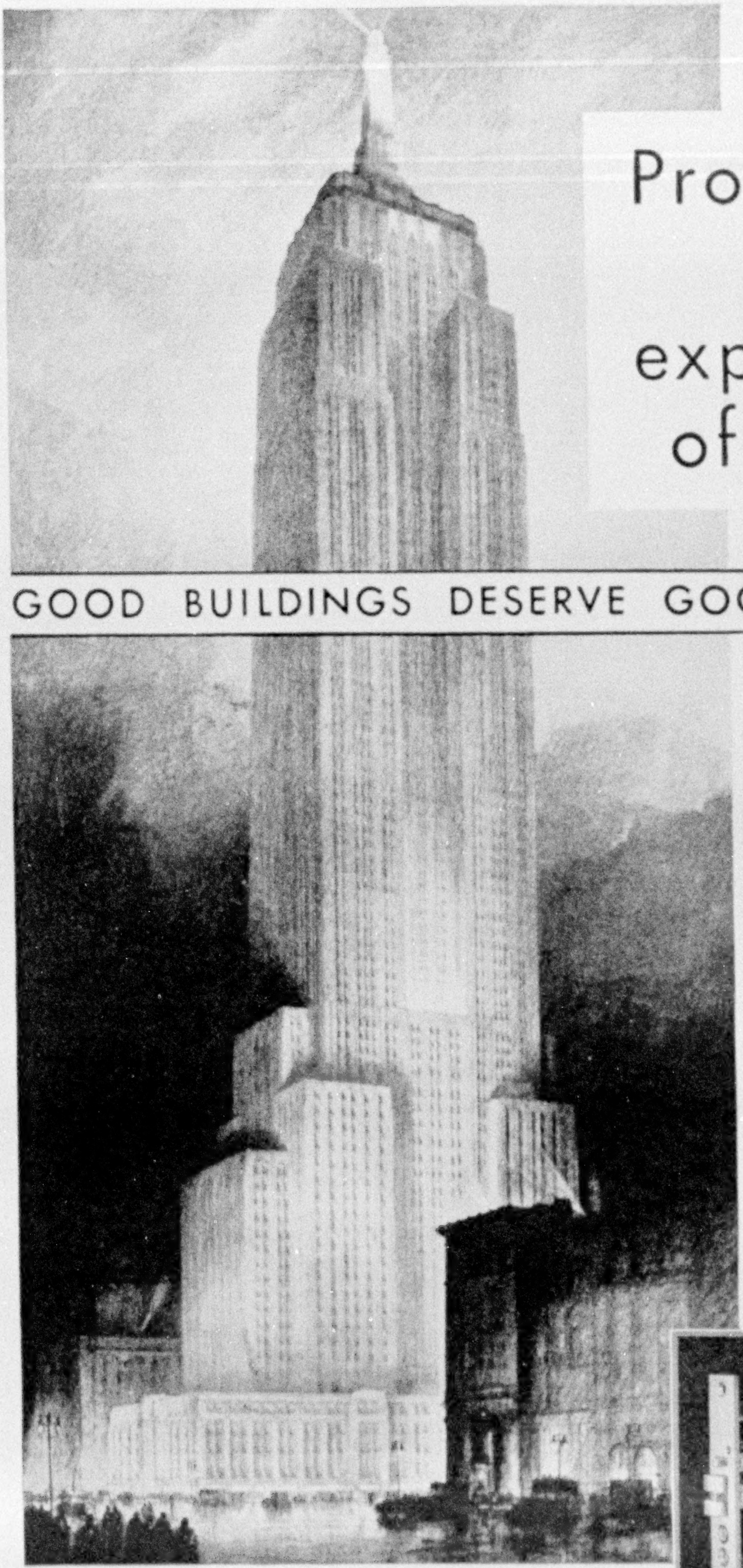
At all Dealers 10¢

HIGGINS' Eternal black writing Ink

JET BLACK—NEVER FADES—PROOF AGAINST CHEMICALS

**For Steel Pens & Fountain Pens**

HIGGINS' ETERNAL
BLACK WRITING INK



Profit from the experience of others

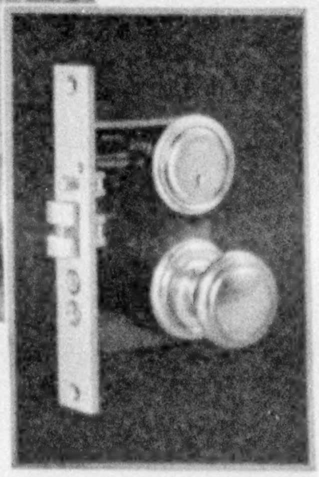
GOOD BUILDINGS DESERVE GOOD HARDWARE

CORBIN

EMPIRE STATE BUILDING, NEW YORK CITY

*The tallest structure of any kind in the world. Towers 1248 feet into the air. 85 stories high. Cost, including land, over $55,000,000.00*

P. & F. CORBIN SINCE 1849
NEW BRITAIN, CONN., U. S. A.
The American Hardware Corporation, Successor
NEW YORK CHICAGO PHILADELPHIA
Makers of the world's most complete line of builders' hardware

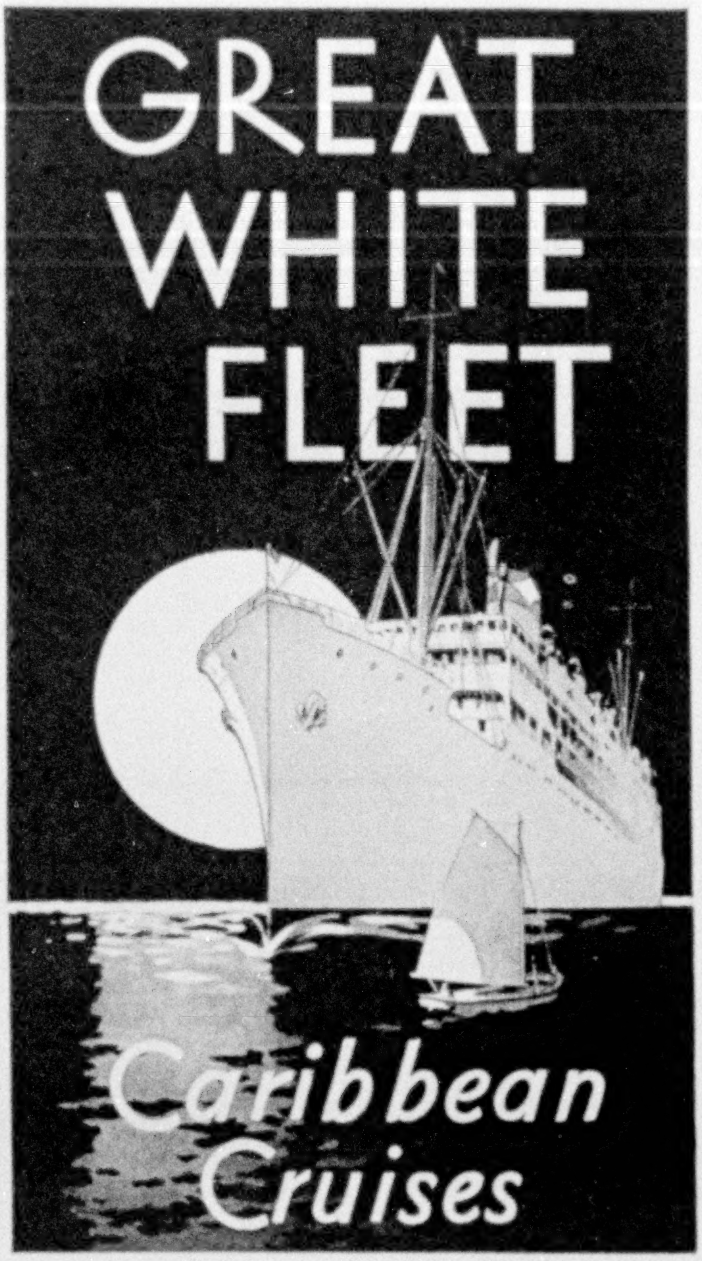


*Architects*
Shreve, Lamb & Harmon

*Contractors*
Starrett Brothers, Inc.

*Hardware*
Corbin

# GREAT WHITE FLEET



Ships and men of the Great White Fleet know their tropics... a matter of prime importance to the traveler in the Caribbean. It means cruises planned by experience, and ships specifically designed for the traveling guest's every comfort. » » »

Wide decks for games, promenading, and luxurious lounging... outside staterooms open to the sea breeze... excellent food prepared by chefs experienced in the art of tempting palates. » » »

Great White Fleet ships sail from New York twice weekly, New Orleans three times weekly. Cuba... Panama... Colombia... Jamaica... Costa Rica... Guatemala... Honduras. Cruises 16 to 24 days, all expenses included. All first-class cabins. Full details from

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UNITED FRUIT COMPANY
● Steamship Service ●
Room 1624, 17 Battery Place, New York City

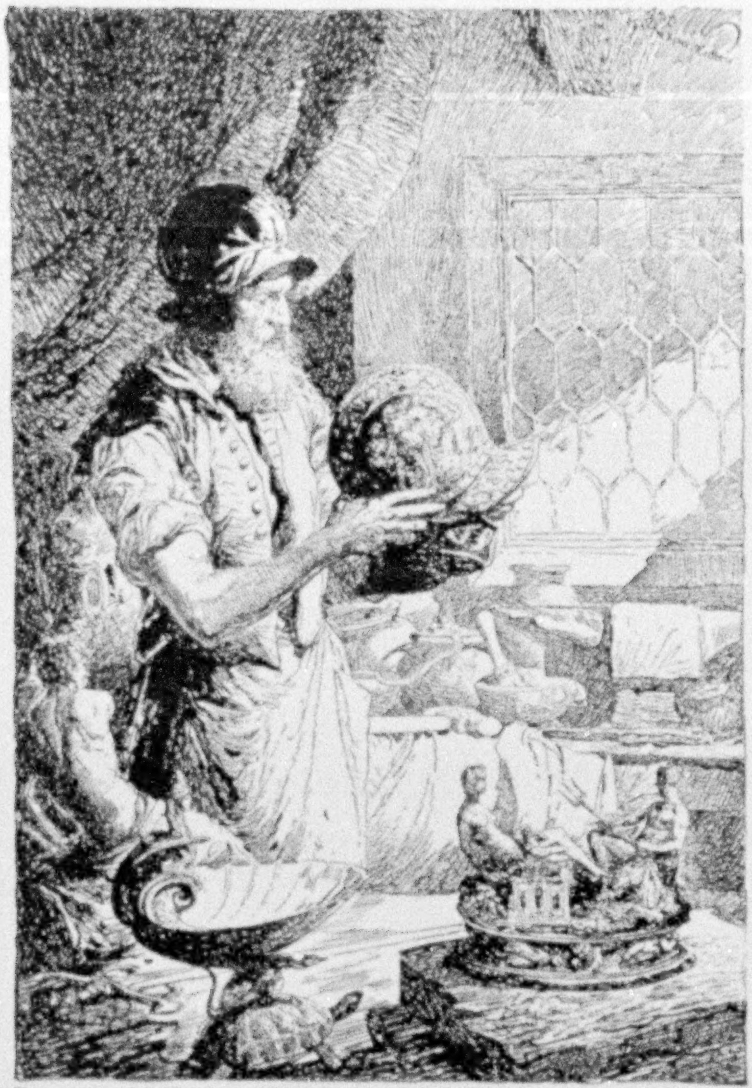
CRUISES
$225 and up

# To whom...
## will you entrust your WORLD CRUISE?

● Why entrust it to any but the world's greatest travel system? On this Canadian Pacific Cruise you enjoy (1) a 137-day high-spot itinerary... (2) spring-around-the-world... (3) the distinguished Empress of Australia, 21,850 gross tons... (4) New York-Paris service and cuisine. Also this "5TH ACE"... Canadian Pacific's world-system of rail, ship, hotel, key-city offices... experience of 7 world cruises. From New York, Dec. 2. As low as $2000. Booklets, ship plans, your own agent or any Canadian Pacific office in 35 cities in U. S. and Canada. ●

WORLD'S GREATEST TRAVEL SYSTEM
**Canadian Pacific**

# Distinction

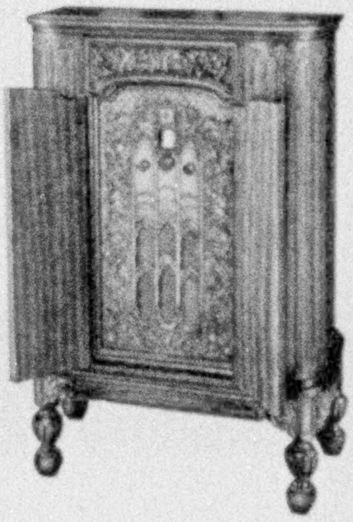


Drawn especially for Amrad Radio by John Richard Flanagan

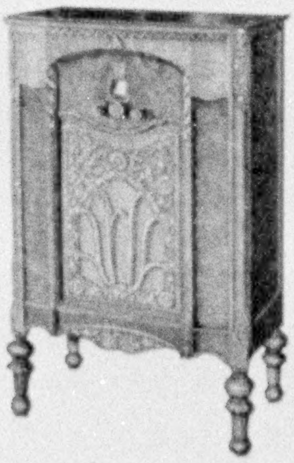
CELLINI . . . Pupil of Michelangelo, the pet of Popes and Kings, this swaggering, eccentric, colorful genius of sculpture and design enshrined the haunting loveliness of French and Italian Renaissance in treasures of gold and marble. Francis I lured Cellini to France, and for five vital years his art developed, by Royal command, always more surely the work of inspiration.

Irreplaceable and priceless gems, zealously guarded down the dusty path of the centuries, rekindle for each successive generation, respect, mingled with awe, for his genius . . . the elfin «Nymph of Fontainebleau», an outstanding treasure of the Louvre . . . a bronze statue of Perseus, in the Loggia, Florence . . . . rare bronzes of Neptune and Cybele, and other mythical gods in Art Museums of the world.

There was no second Cellini . . . . there is no substitute for Amrad. As an object of art, its rich and beautifully designed cabinets might well have graced a Grand Salon at Fontainebleau, in Cellini's time . . . . its tone and great genius in bringing a million subtle variants of entertainment into your home, place it, as well, among the «immortals».



*(Right)* The AMRAD SONDO Model. A new electric phonograph and radio combination incorporating the latest eight tube AMRAD Screen Grid, Neutrodyne chassis and the new AMRAD Type 249 Dynamic-power speaker. The cabinet is the final word in radio cabinet beauty. It contains two wells for records. Priced at $240.00, less tubes.



*(Left)* The AMRAD RONDEAU Model. A magnificent cabinet enlivened with exquisite carved decorations. The set is the latest AMRAD eight tube Screen Grid, Neutrodyne chassis. The new AMRAD Type 249 Dynamic-power speaker is incorporated. Automatic volume control maintains a practically uniform volume. Priced at $150.00, less tubes.

AMRAD DIVISION of
THE CROSLEY RADIO CORPORATION
Powel Crosley, Jr., Pres. Home of «the Nation's Station»—WLW
CINCINNATI

# AMRAD Radio

## DEAN CORNWELL, whose great mural decorations will soon adorn the new Los Angeles Public Library, traveled thousands of miles to view gorgeous new scenes, strange costumes, interesting faces, ancient places. But he was inexperienced with cameras.

"Take along a Graflex," friends told him—"it eliminates guesswork in focusing." The "Jerusalem Drink Seller" above, is one of a fine collection of human interest photographs made by Mr. Cornwell with his Graflex, on the trip. He discovered what every traveler and artist should know—that a Graflex camera puts superior pictures within everybody's reach.

Let Your Dealer Show You The CAMERA for the Most *Interesting* Pictures

**GRAFLEX**

FOLMER GRAFLEX CORP. . . . ROCHESTER, N.Y.

Folmer Graflex Corp., *Dept. 65*, Rochester, N.Y.
Please send copy of booklet "Why a Graflex?" . . . concerning camera which eliminates guesswork in focusing . . . to name and address on margin of this page.

---

## When It Comes to HUSKY PERFORMANCE . . . You Can't Beat a Matthews!

Please send the illustrated folders on Matthews Cruisers.

THE first requisite—the one important attribute of a cruiser must be ruggedness. Every rib, every plank, each knee and joint must withstand the greatest possible strain a boat can be put to—not once—but time and time again—year after year. Who is there to say how stout the frames should be? How heavy the stem, keel and planking? How close the tolerances in the thousand and one operations entering cruiser construction? Who, but the builder! And experience dictates his decisions. The husky Matthews that is capable of riding out any storm that blows—that serves the ends of speed, comfort and those added refinements of life is the culmination of 39 years of boat building experience. Ten trim 38 and 46 foot Matthews Stock Cruisers with twenty-four varying cabin arrangements are available. Let us send you the descriptive literature on these handsome boats today.

**THE MATTHEWS COMPANY**
*Designers and Builders of Boats of Distinction . . . Since 1890*
**300 Bay Side** **Port Clinton, Ohio**

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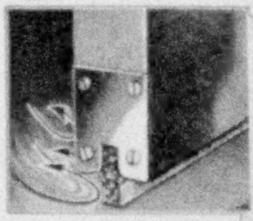
## STOP those Under-Door DRAUGHTS

*Be Comfortable this Winter*



Most bedroom doors have a crack equal to a hole 7" x 3". Hidden in bottom edge of door In-Dor-Seals seal this crack, raising and dropping automatically as door is opened and closed.

THE extra large crack under bedroom doors becomes a source of draughts that chill every room in the house. This means uncomfortable morning temperatures and fuel waste. At a nominal cost Chamberlin In-Dor-Seals will permanently stop these draughts. They also deaden sounds and prevent room to room circulation of dust and odors. Installed by Chamberlin everywhere. Write for facts and free estimates.

CHAMBERLIN METAL WEATHER STRIP COMPANY, Inc., Detroit, Michigan
Weather Strip—Caulking—Screens
Over 100 Factory Sales-Installation Branches

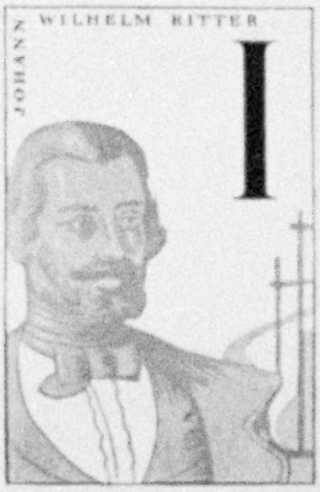
CHAMBERLIN WEATHER STRIPS
SINCE 1893 · THE STANDARD

Send me information and a free estimate on Chamberlin In-Dor-Seals for _____ inside doors
Name _____
Address _____
City _____

FC 380

THE FIRST OF A SERIES OF ADVERTISEMENTS DEALING WITH ULTRA-VIOLET RADIATION IN THE HOME.

# . . . this thing called ULTRA-VIOLET



IN 1801 JOHANN WILHELM RITTER, a German physicist, made a most interesting discovery. While exploring the theories of Sir Isaac Newton and others—that light was a series of waves (similar to waves upon the water) in the ether, and that color was caused by a difference in the lengths of these waves—Ritter found waves even shorter than the visible violet. Invisible waves so short that it would take 70,000 of them to make an inch. And thus he laid the foundation for the mighty development which scientific research has since weaned from the rainbow-hued sun in the interests of better living . . . this thing called Ultra-Violet radiation.

Like visible light waves, and the infra-red and wireless waves, Ultra-Violet waves also have their function in the scheme of things. Apparently that function, in human beings, is to stir up the skin until it becomes a living laboratory, producing substances that go through the body, building up bone and flesh and keeping the system tuned-up.

Today modern science, measuring these Ultra-Violet waves with the Spectroscope, has divided them, according to length, into three classes: Near Ultra-Violet, Middle Ultra-Violet, and Far Ultra-Violet. Near Ultra-Violet rays—those waves closest to the visible—have some biological value. Far Ultra-Violet, on the contrary, is, in nature, carefully screened out by the atmosphere and never reaches us. (These powerful rays, studied by science through artificial Ultra-Violet sources, are dangerous unless prescribed by a physician and supplied under his supervision.)

According to present knowledge the Middle Ultra-Violet contributes most to better living. This is the Ultra-Violet which tans our skins—which is the dominating factor in producing Vitamin D. This "sunshine vitamin" promotes proper bone growth and blood content, resistance to disease and general well-being . . . And yet the power of ultra-violet penetration, as far as the human skin is concerned, is, at maximum, only about the thickness of this sheet of paper.

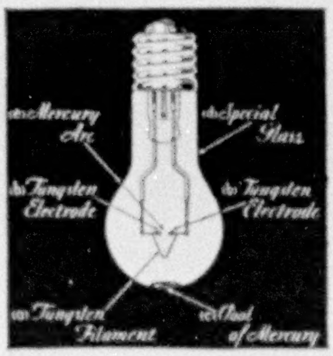
Now the scientists of General Electric Company, after years of research, have made these beneficial Middle Ultra-Violet rays available to the general public in the new G. E. Sunlight (Type S-1) Lamp. At a distance of three feet, this source, in a proper reflector, provides the same Ultra-Violet effectiveness as mid-day midsummer sunlight.

The Type S-1 Lamp is the first generator of Ultra-Violet to be offered to all, which embodies (with an adequate supply of Ultra-Violet radiation) the safety, the simplicity and the economy of the modern MAZDA lamp. Although it resembles a regular MAZDA lamp, the G. E. Sunlight (Type S-1) Lamp will not fit or operate in an ordinary lamp socket. *It must be used in a special fixture* such as the General Electric Sunlamp or the equipment made by other manufacturers.

This new G. E. Sunlight (Type S-1) Lamp is *safe*, because the bulb of special glass filters out the shorter wave lengths which are dangerous. It is *simple*, because it operates without fuss, noise or mechanism, at the touch of your fingers to the switch of the special unit. It is economical, because lamp and transformer (the transformer is part of the necessary special unit) consume only four hundred watts of electricity, and cost, on an average, only three cents per hour to operate.

In presenting, for home use, a safe, convenient way to get all the benefits of Ultra-Violet radiation found in midsummer sunlight, the scientists of General Electric Company have not attempted to provide a cure-all or a substitute, under any circumstances whatsoever, for the services of a physician in case of illness or disease. Used in the proper unit, the General Electric Sunlight (Type S-1) Lamp is for well people—that they may remain well—and retain the vigor, vitality, mental alertness and resistance to disease which Ultra-Violet provides.

In buying a sun-lamp of any kind for the dark days of winter ahead, insist that the equipment you select contains the G. E. Sunlight (Type S-1) Lamp. It is the heart of modern man-made sunshine, and is sold in accordance with the requirements of the Council of Physical Therapy of the American Medical Association.



**Just as a radio tube can ONLY function properly in a set designed for its use, the G. E. Sunlight (Type S-1) Lamp MUST be used in special equipment to obtain ultra-violet radiation.**

*The Type S-1 Lamp consists of a "V" shaped tungsten filament, two tungsten electrodes, and a pool of free mercury enclosed in a bulb of special glass.*

*When the current is turned on, the filament is heated immediately to incandescence.*

*A portion of the mercury vaporizes and an arc is formed between the electrodes. The light emitted is filtered by the special glass which transmits the most desirable ultra-violet rays to you.*

**The Incandescent Lamp Department**
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*Nela Park, Cleveland, Ohio*

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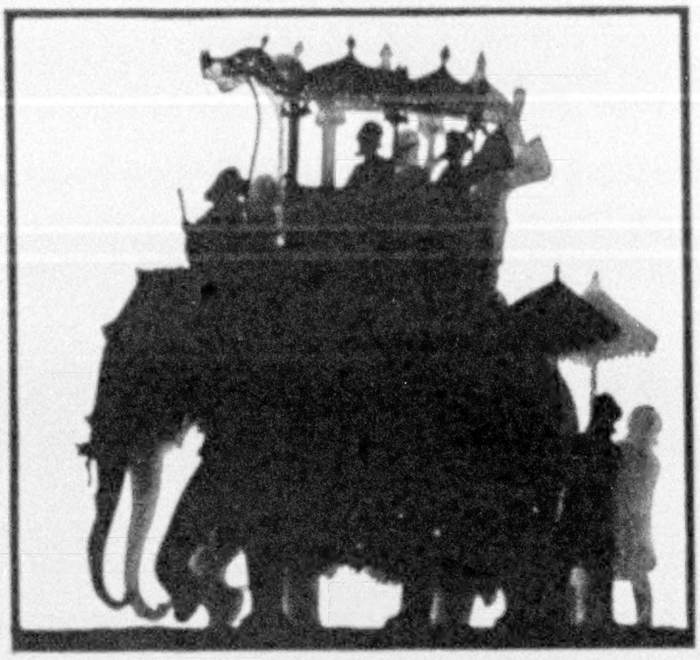
*Join us in the General Electric Program, broadcast every Saturday evening on a Nation-wide N.B.C. Network.*



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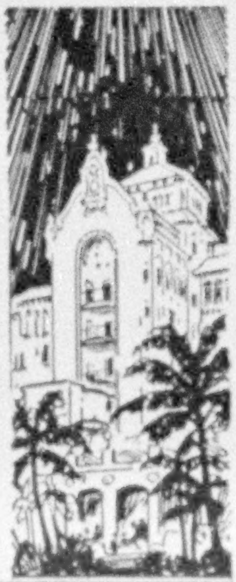

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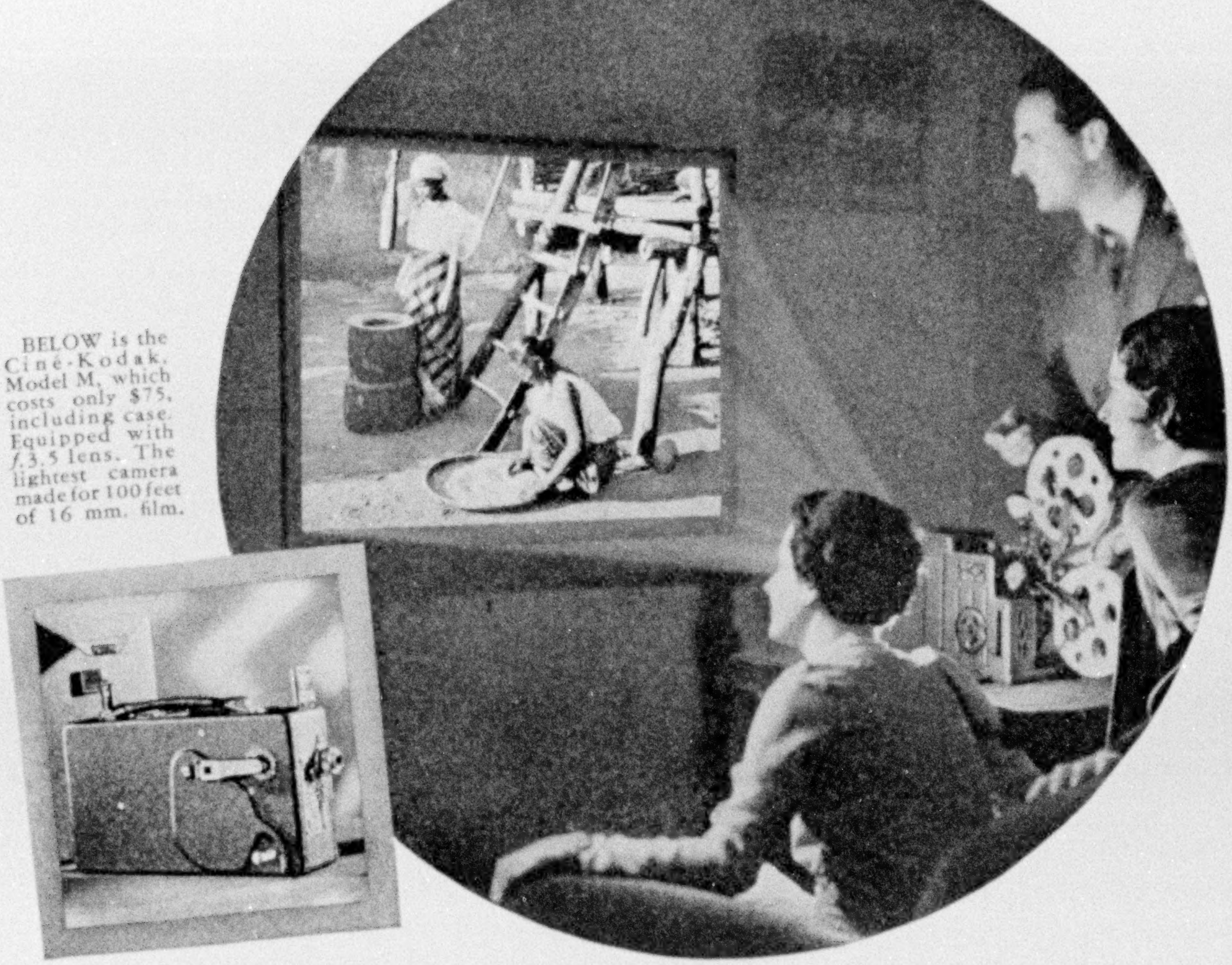

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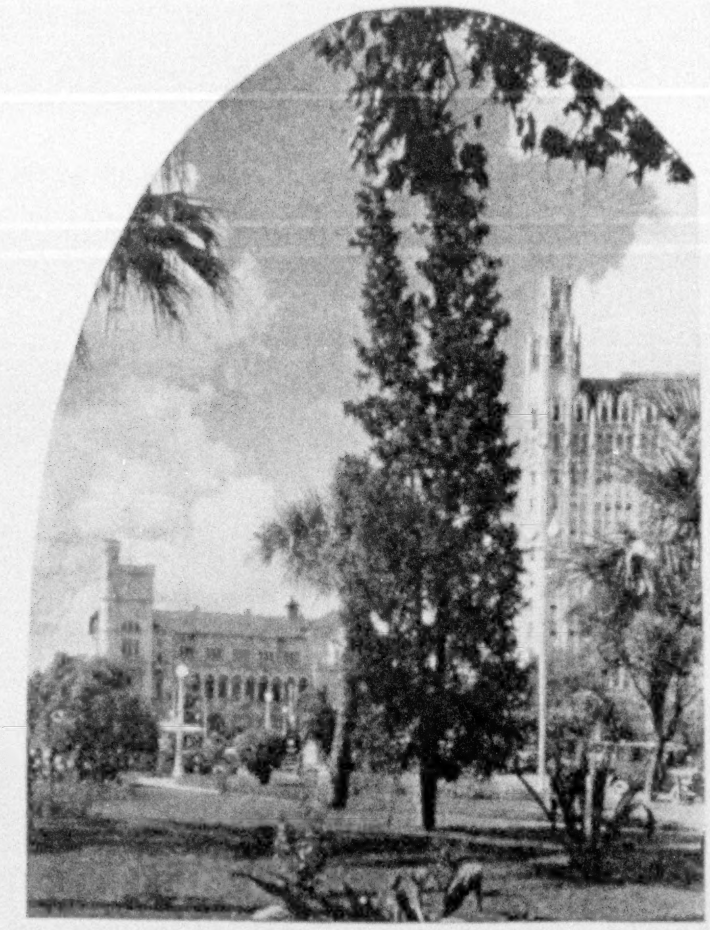

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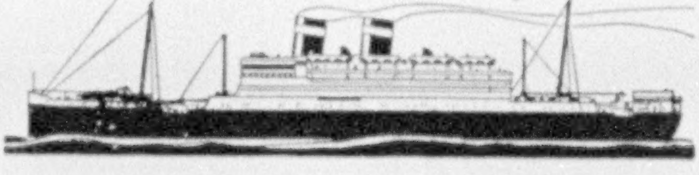

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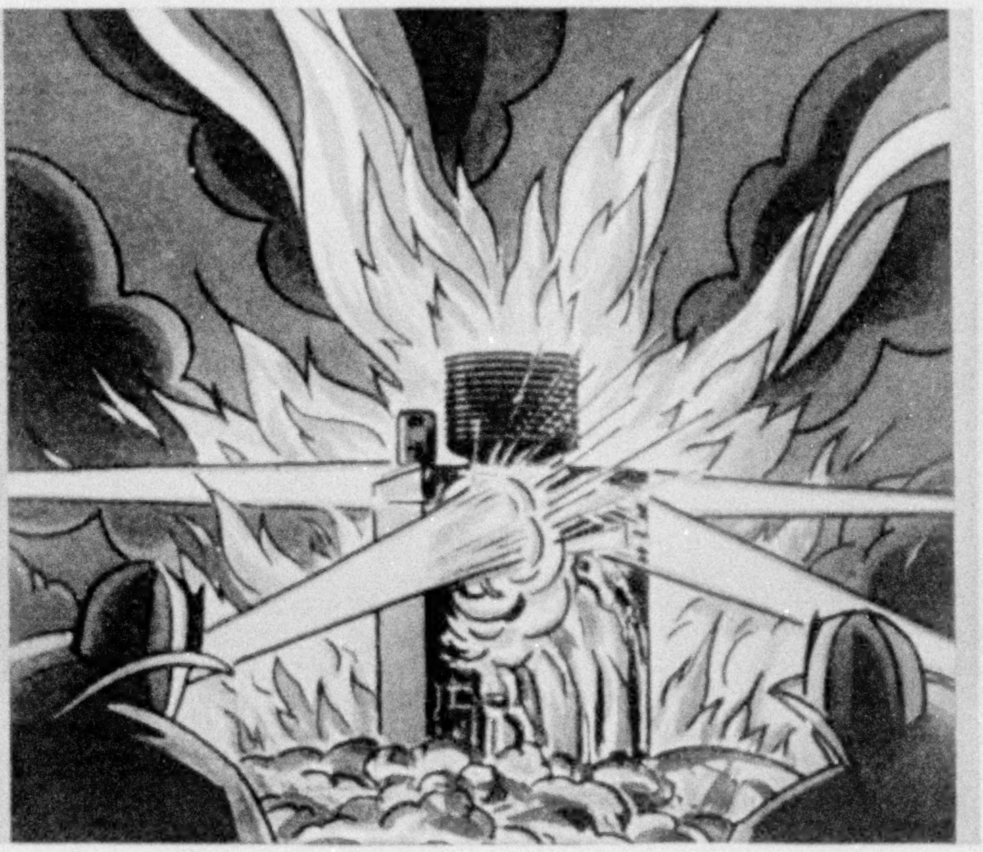

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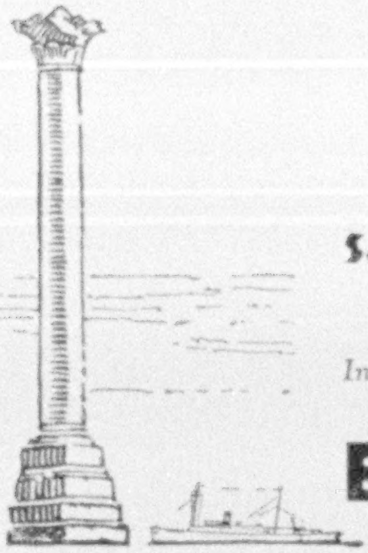
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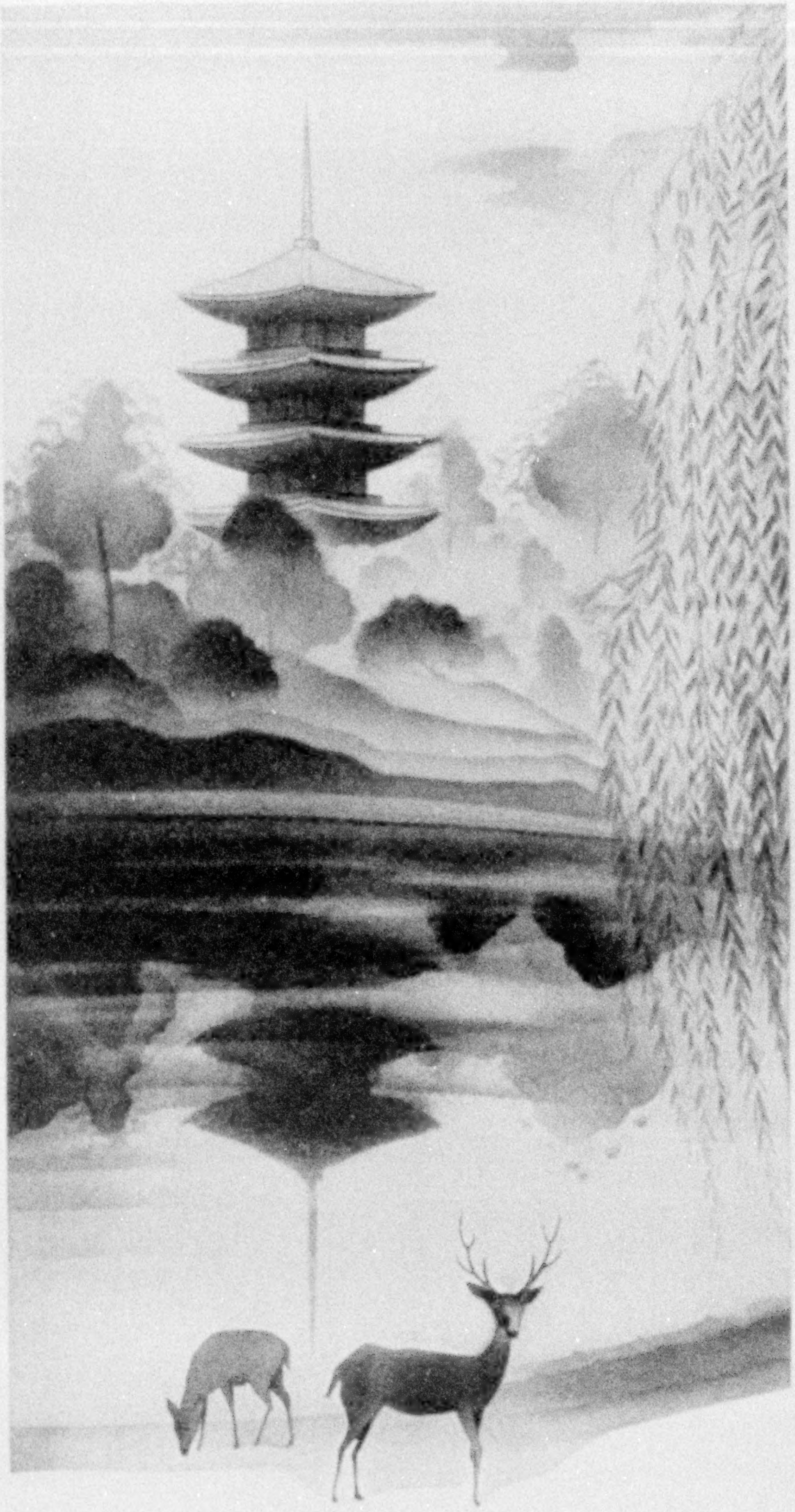

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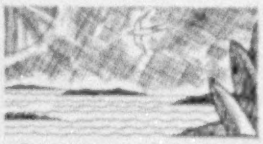

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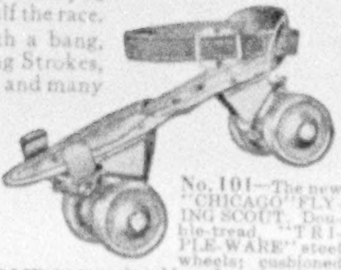

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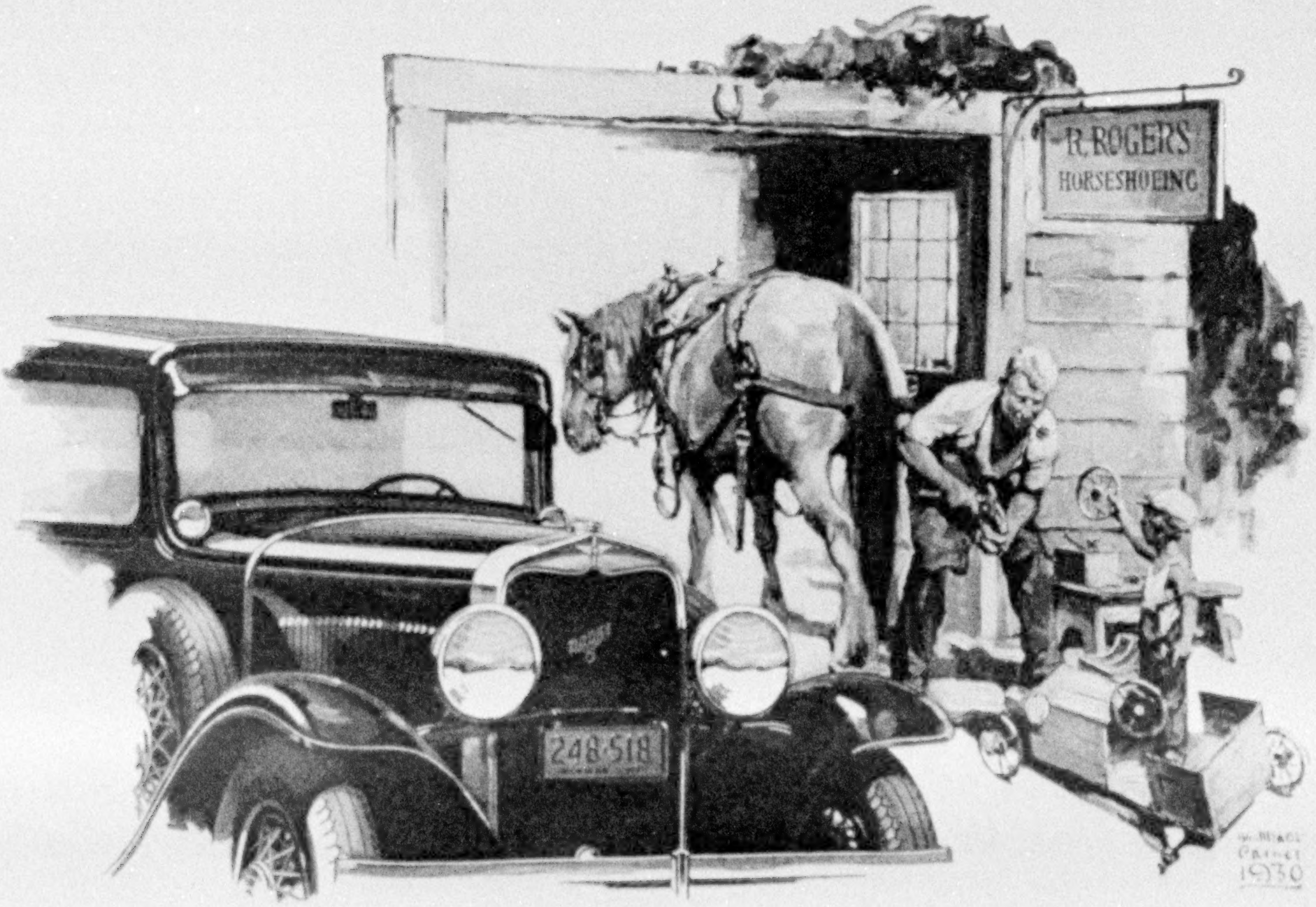

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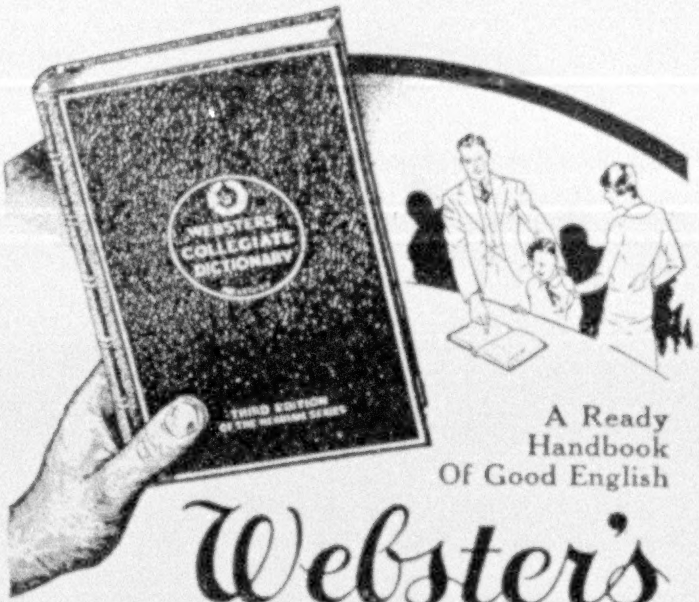

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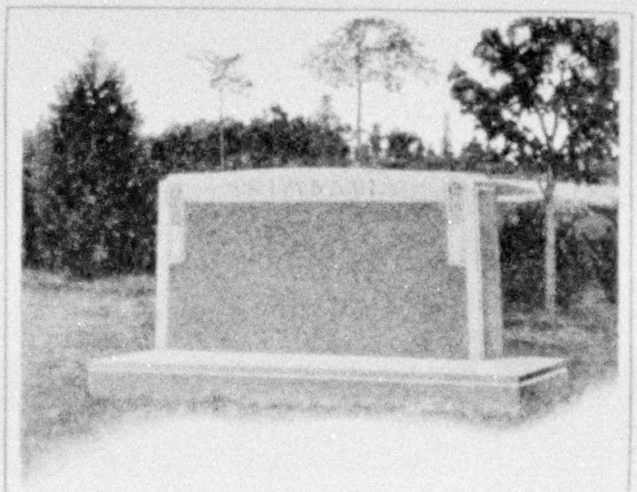

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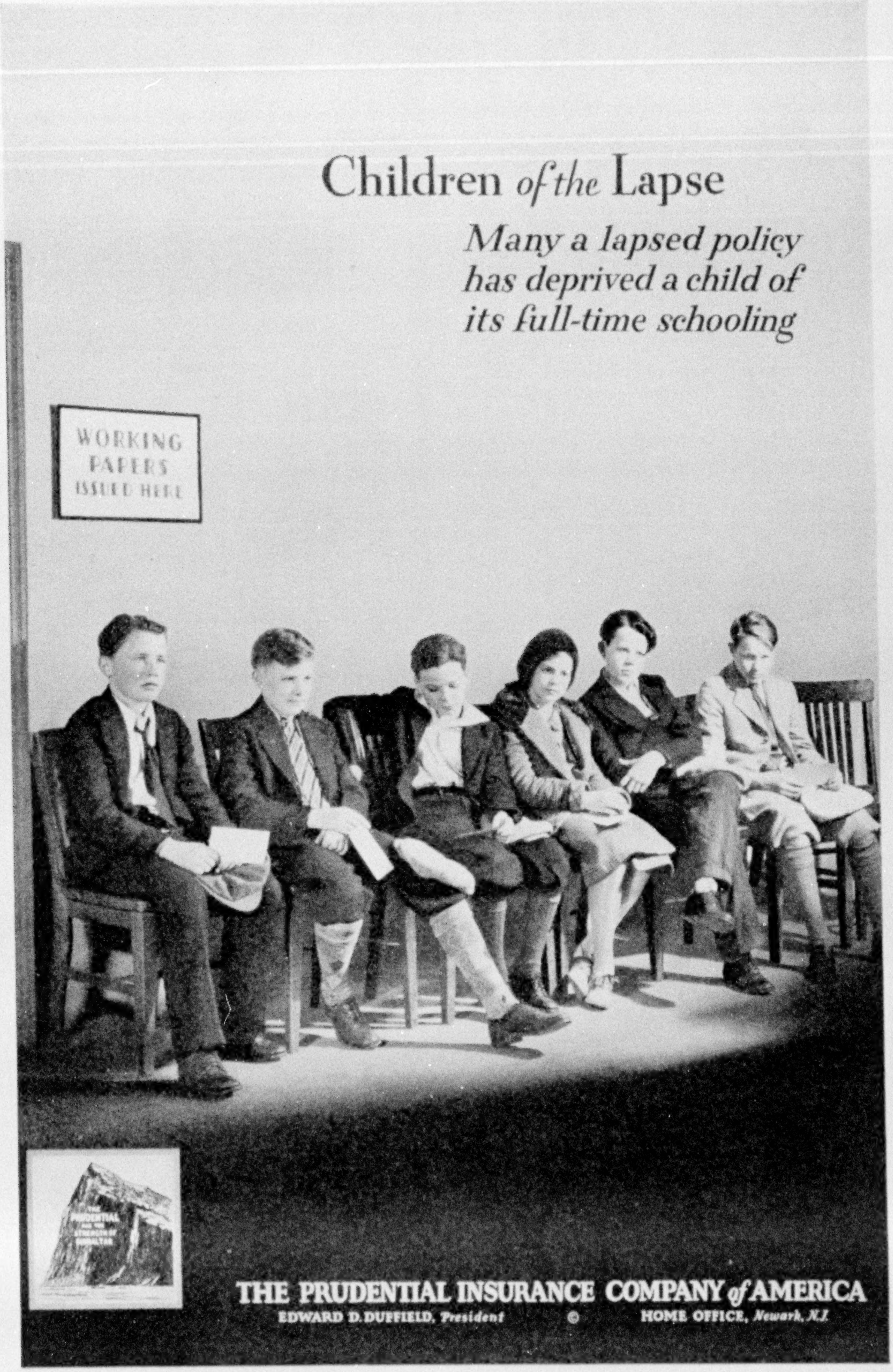

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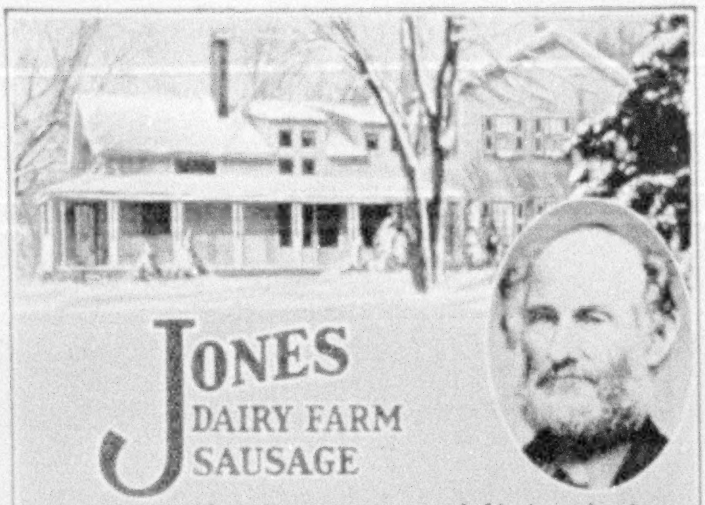

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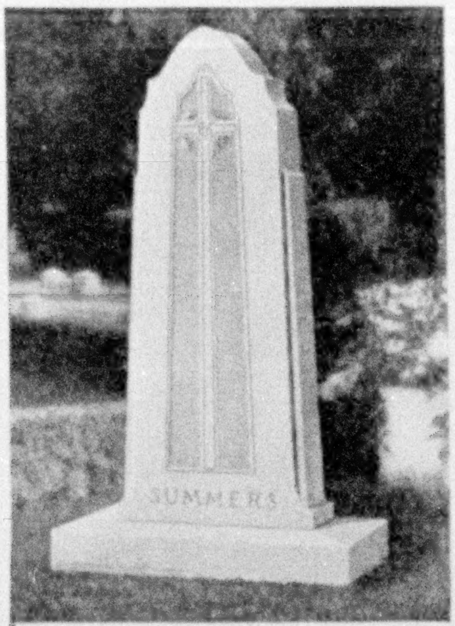

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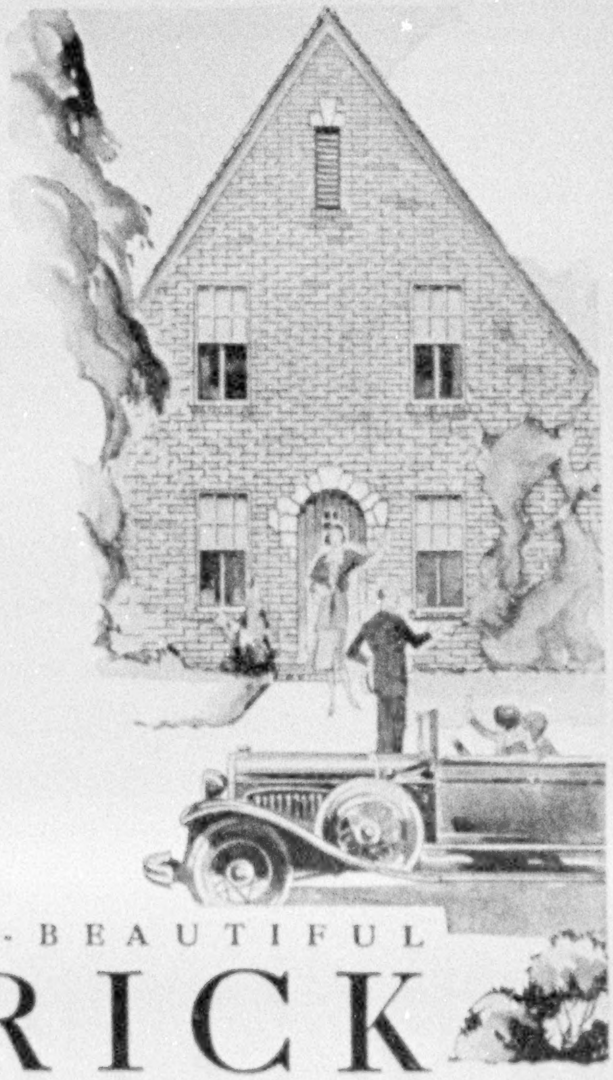

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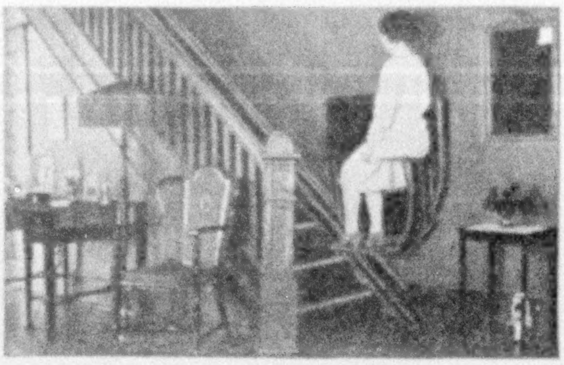

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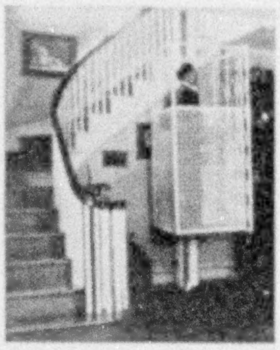

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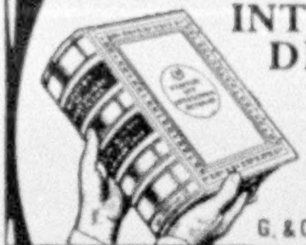

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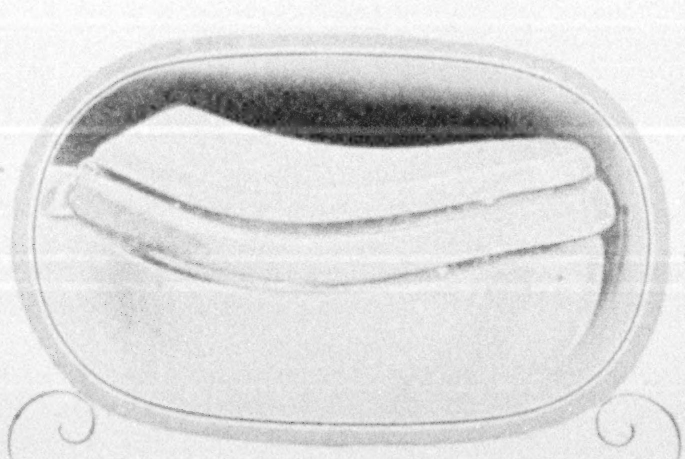

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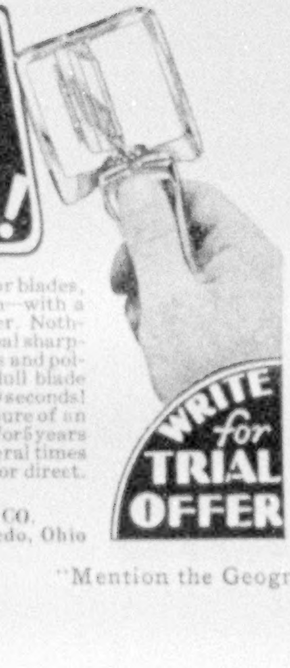

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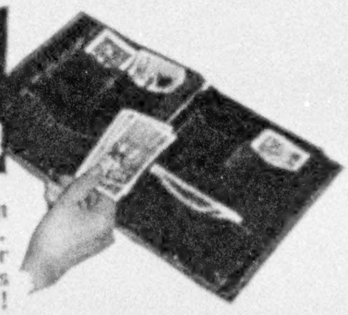

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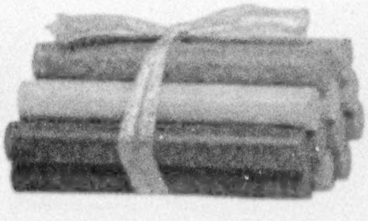

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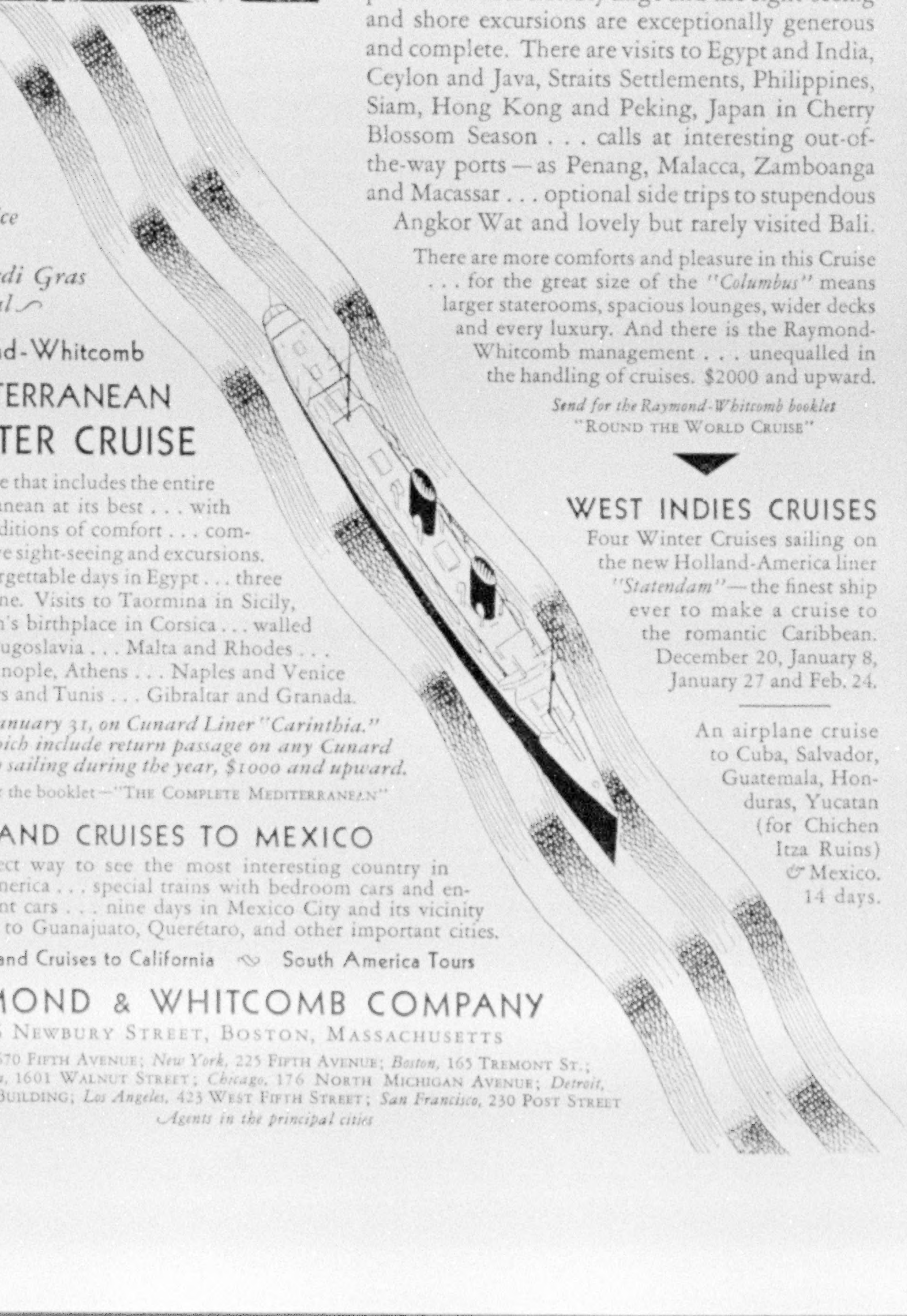

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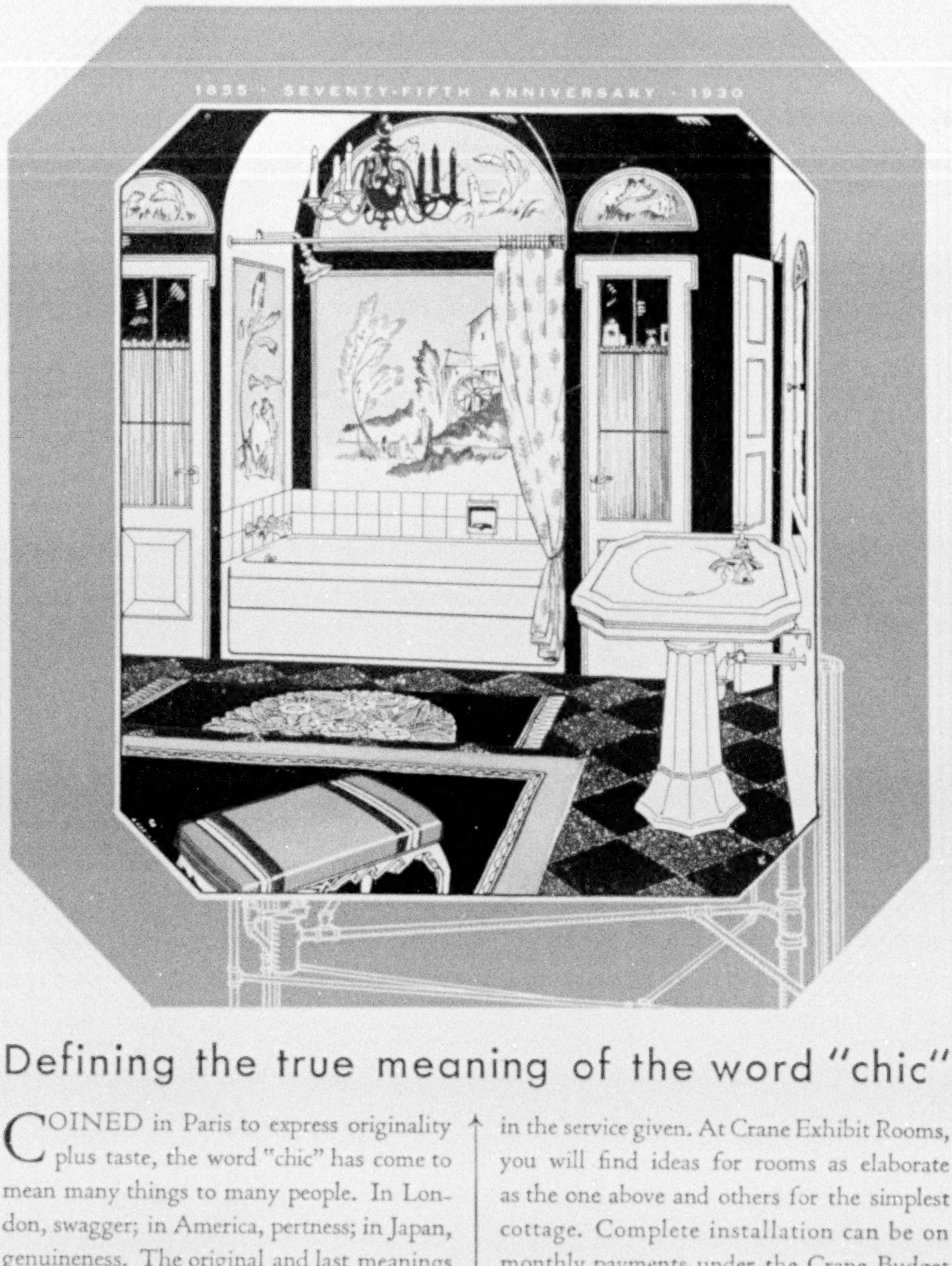

# Defining the true meaning of the word "chic"

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